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SONGS.

FROM H. HEINE'S "BUCH DER LIEDER."

I.

WARM summer dwells upon thy cheeks
And in thy dancing eyes;
But in thy little heart, fair child,
Cold, frosty winter lies.

Yet these, I think, as years grow on,
Will play a different part;
Then, winter on thy cheeks shall be,
And summer in thy heart.

II.

HAST thou forgotten, quite forgotten, dear,
That I possessed thy heart for many a year?
Thy little heart, so small, so false, so sweet,
Sweetest and falsest heart that ever beat.

The love and pain hast thou forgotten, dear,
That weighed upon my heart for many a year;
I know not which was greater of the twain,
Only that they were great, both love and pain.

III.

I LONGED to linger, resting
Beside you, free from care;
But you ran off, protesting
You had no time to spare.

I vowed my soul should never
Know other queen but you;
You only laughed, however,
And dropped a curtsy, too.

All day you sorely tried me;
And, not content with this,
You cruelly denied me
Even a farewell kiss.

But if you will not soften,
I shall survive it still;
I've been through this so often,
Sweet — and it does not kill.

Examiner.

AN APRIL PICTURE.

A BLACK-WALLED barn, with roof of sombre
red;

Within, a dusty, sunlit granary-floor;
On either side a widely opened door
Let in broad sunlight on the thresher's head,
And showed the cattle 'neath a neighb'ring
shed.

Beyond the sunshine, piled in golden store,
Lay the clean grain; while ever more and
more

The empty straw, and the bright heap it made,
O'ertopped the well-stacked sheaves of
heavy wheat

That in the sunlight close beside our feet
Lay ready to the thresher's busy hand,

Who in the midst with wilful-falling flail
Beat a slow music they could understand
To lazy barn-fowls seated on the rail.

Spectator.

E. C. T.

A PANCAKE-MAKER, — IN PARIS.

UNDER an archway he stands, — every day he
is there,
The little old pancake-man, with his tins and
his cooking-ware;
Tossing his batter aloft, as he brays out many
a yarn

Concerning the making of *crêpes*, which he
designates *à la MacMahon*.

"First, there are eggs to be sifted, — the
country's best silver and gold;
Next for some flummery mixture, or else the
matter won't hold;

Stir it about with sugar, then pop it into the
pan,

And out comes a *crêpe* for the marshal — or —
any popular man."

The people around him laugh, — "There's
wisdom in that!" they cry;
For had not old Antoine seen the violets
bloom and die?

The lilies, too, — yet there, still there, with
his "*voix d'âne*,"

He praises now, and tosses his *crêpes*, — *à la
MacMahon*!

Spectator.

H. A. DUFF.

Rue St. Honoré, March 5, 1877.

IN ABSENCE.

GOD keep you, dearest, all this lonely night.
The winds are still,
The moon drops down behind the western hill.
God keep you safely, dearest, till the light!

God keep you still, when slumber melts away,
For care and strife
Take up new arms to fret our waking life.
God keep you through the battle of the day!

God keep you! Nay, beloved soul, how vain,
How poor is prayer!

I can but say again, and yet again,
God keep you every time and everywhere!

Evening Post.

M. A. DE V.

AN APRIL SHOWER.

THE primrose-head is bowed with tears,
The wood is rippling through with rain,
Though now the heaven once more appears,
And beams the bounteous sun again.
From every blade and blossom-cup
The earth sends thankful incense up.

O happy hearts of flower and field,

That, soon as grief be overpast,

Your fragrant thankfulness can yield

For troubled skies and rainfall blast!

I would that I as soon could see

The blessings of adversity!

Spectator.

F. W. B.

From The British Quarterly Review.
ACROSS AFRICA.*

THE record of African travel has a personal interest to almost every class of educated readers: to the lover of adventure, it is the story of adventures wild beyond even the wildest of dreams; to the sportsman, it tells of the biggest of big game; to the geographer, it is an onward step towards the solution of one of the great geographical problems of the day; to the merchant or trader, to the geologist, botanist, or zoologist, it equally tells of new fields for the exercise of commerce, of industry, or of science; and to those who more especially recognize that "the proper study of mankind is man," it offers the newest of novelties—it brings to the knowledge of the anthropologist customs yet unheard of, and soon again, we may hope, to be heard of no longer; or marshals before the missionary countless hordes as yet ignorant of the sacred name.

Appealing thus to so many distinct interests, it is not to be wondered at that the occasional short notices of Lieutenant Cameron's remarkable journey across Africa have been eagerly seized on; that crowds have everywhere gathered to hear Commander Cameron tell his own story in the fewest of words; and that the book, whose title stands at the head of this article, has been demanded at all the libraries for many months before its publication. Could it by any possibility have come out on the day that Mr. Cameron landed in England, it would have had a success such as perhaps no book has had for many years. Now that it appears, after the lapse of a considerable interval, it has been in a measure forestalled; so much of its subject-matter has been made public in other ways, that it may almost run a risk of falling dead in the literary market. And the more so, as it has been published just as Parliament opens on a time of intense political excitement, and without having any particular claim, from a literary or artistic point of view, to the attention of the more æsthetic part of the public. It would be a pity if such should

be the case; for the book, though carelessly, or perhaps we should rather say clumsily, put together, has a very real and permanent interest, as the genuine story of difficult and dangerous exploration; and it will, of necessity, continue for many years to be the text-book for the geography and anthropology of south tropical Africa.

It is, we may suppose, within the recollection of our readers that Mr. Cameron was appointed by the Royal Geographical Society to the command of an expedition which should enter Africa from Zanzibar; should look for and join Dr. Livingstone—supposed then to be somewhere to the west of Lake Tanganyika—and, under his orders, should continue the exploration of central Africa, "for the purpose of supplementing his great discoveries." Joined with Mr. Cameron, was his old messmate, Dr. Dillon, a surgeon in the navy; and the two left England on the 30th of November, 1872. At Zanzibar, or at Bagamoyo on the mainland opposite, they were joined by Mr. Murphy, a lieutenant of artillery, and afterwards by Mr. Robert Moffat, a nephew of Dr. Livingstone, who, on hearing of the expedition, had sold his sugar plantation at Natal, and was now eager to devote himself and the whole of his little fortune to the cause of African exploration. His devotion was indeed to the death: he died of fever, at Simbo, within a few weeks after the beginning of the journey.

From the time of their arrival at Zanzibar it was some two months before the stores were all ready, and a sufficient number of men enlisted to carry them; and after the many and usual vexatious delays, the expedition made its final start from Kikoka on the 28th of March, 1873.

We may pass lightly over the earlier part of Mr. Cameron's journey, through a country which the travels of Burton, Speke, Grant, and Stanley have made almost classical: it is now well mapped along the different routes, and is, or may be, familiar to every student of geography. The expedition arrived at Unyanyembe on the 2nd of August, without further hindrance than that commonly experienced from the laziness or dishonesty of the

* *Across Africa*. By VERNEY LOVETT CAMERON, C.B., D.C.L., Commander Royal Navy. Two Vols. London. 1877.

pagazi, or porters, the only system of carriage yet devised in this roadless and rugged country.

The question of portage is, beyond doubt, next to the want of coinage, the great obstacle in the way of African travel; and until some substitute can be found for the idle, cowardly, thievish scoundrels picked up at Zanzibar or near the coast, whether this substitute is the horse, the honest, hard-working, and faithful donkey, the bullock, useful in life, useful also in death, or even a locomotive engine on a line of railway, travelling will continue to be slow and costly, and remunerative traffic quite impossible. We will not doubt that some improvement will soon be made. The London Missionary Society has, we believe, determined to establish a station at Mwapwa, half-way to Unyanyembe; and one of their missionaries, the Rev. Roger Price, by taking a more northerly route from Sidani, and so avoiding the Makata swamp, succeeded last July in reaching that place, with four oxen and a donkey, all in good health, and in bringing them back again to the coast. This must of itself tend to settle the difficulty, which, once conquered, will probably disappear. There seems no reason why others should not do easily what Mr. Price has shown them how to do; the London Missionary Society means to make the attempt on a large scale, intending, if success crowns its efforts, to push on to Ujiji; and there is, we understand, a remote possibility that the sultan of Zanzibar may see it advantageous to his government to carry a caravan road through from Bagamoyo, or more probably from Sidani.

Taborah, the chief town or settlement of Unyanyembe, has been from time immemorial a centre of inland traffic. It is a point to which all caravans come, and from which they diverge, whether to the north, south, or west, to carry on their trade in slaves or ivory with distant tribes. It is now held by a detachment of Balooch and Arab troops, in the pay of the sultan of Zanzibar, and is the home of a considerable number of Arab settlers, who live there in comfort and Oriental luxury, untroubled even by the social want of which we, in England, hear so much — the want

of good cooks, for the best is to be bought for two hundred dollars. The trade is, however, by no means exclusively in the hands of the Arabs: the natives take their share in it with eagerness and remarkable industry, being, according to Speke, the only people of Africa who have shown any commercial aptitude.

Some years previous to Cameron's visit this industrious community had been drawn by some peculiarly "smart" trick on the part of one of their number, into a savage war with a neighboring chief, Mirambo, who had indeed — if Cameron's information was correct — been foully swindled in the first instance; though Mr. Stanley has taken a different view of the affair: but, as matter of fact, the disturbed state of the country, added to continually recurring attacks of fever, detained Cameron and his companions there for some weeks; and he was still there on the 20th of October, when, as he lay in bed prostrate from fever, his servant came running in with a letter. It was from Jacob Wainwright, Livingstone's attendant, and contained the melancholy news of Livingstone's death.

It is no part of our present purpose to speak of the character or labors of David Livingstone; they are known wherever the English tongue extends, wherever African geography or exploration has any interest, and they have been very fully noticed in two recent numbers of this review.*

The effect of this news on the expedition was, however, important. The expedition had been fitted out, primarily, to relieve and assist Livingstone; and now that he was dead, and the party bearing his body to the coast was on the way to Taborah, its special work seemed to be prematurely ended. Murphy accordingly announced his intention of returning. Dillon and Cameron, on the contrary, determined to go on, at least to Ujiji, to secure Livingstone's remaining effects; and then, if possible, to push westward and follow up his explorations. Unhappily, Dillon fell sick a few days before the time fixed for their start, and was compelled to give up the idea. Murphy offered to go

* *British Quarterly Review*, Nos. 118 and 112.

on with Cameron, but the everlasting difficulty about *pagazi* — porters, beasts of burden — determined him to decline the offer. He resolved to go on alone; and from this time the story of the expedition is simply the story of Cameron's adventure — of what he suffered, what he endured, and, let us not forget it, what he did.

On the 9th of November, Livingstone's caravan, with Dillon and Murphy, started for the coast, and Cameron on his westward route. The parting was a solemn one, for Dillon was very ill, and Cameron far from well. He was, he tells us, nearly blind from ophthalmia, and very weak from the fever which was still hanging about, and had reduced him to a mere skeleton: his weight on leaving Taborah was only seven stone four. It seemed more than probable that the two friends then separating would meet no more in life, and this probability was in fact fulfilled; for on the 18th, Dillon, who was suffering from the complicated effects of dysentery and fever, being left alone, in an access of delirium shot himself through the head.

Diplomatic difficulties and the caprice of his mob of *pagazi* compelled Cameron from this point to make a considerable bend to the southward, and to follow a route midway between the direct line taken by Burton, and the still more devious track which had been forced on Stanley. This was, in reality, fortunate, as it opened out to him a district till then unexplored, and thus threw new light on the river system which feeds Tanganyika on the east. The country, at a high level (thirty-eight hundred feet), was for the most part flat, though here and there undulating and of a park-like beauty, in which "clumps of magnificent trees were grouped with an effect that could not have been surpassed had they been arranged by the art of the landscape gardener." Owing to this prevailing flatness, the rivers during the wet season spread to a great width. The South Ngombé, one of the southern affluents of the Malagarazi, spreads, in time of flood, "about three miles on either side," giving thus to a minor tributary a total width of six miles.

Passing through Ugara, he was heavily

mulcted in *mhongo*, or toll. But that being paid, the natives were friendly enough, and supplied him with guides, one of whom was the proud possessor of an umbrella, under the shade of which he strutted in a condition of pristine nudity. Throughout, the country was beautiful, apparently fertile to an exuberant degree; the climate, too, does not appear to be bad; and the rain, though at times extremely heavy, is so only in sharp and short bursts, with occasional storms of thunder and lightning: even during the rainy season it is not excessive. Colonel Grant has estimated the annual rainfall at Unyanyembe and northwards at about thirty-four inches, or three-fourths of what it is at Plymouth; and, without any measurements, that of Ugara would appear to be about the same.

But the country, notwithstanding its great natural advantages, is desolate. A state of war is perpetual, and is kept up as a matter of interest by slave-drivers, with whom commercial success means — plundering a village. Travelling through a land in this ingrained state of anarchy is necessarily difficult, and so Cameron found it. Belonging to no party, he was suspected by all. His intentions were peaceful, but that the natives could neither believe nor understand: they attributed his moderation to weakness, and their demands for *mhongo* — tribute — increased accordingly. They were to some extent right; for whilst he had laid down as a rule that exploration was not to be pushed at the risk of bloodshed, he had neglected that great political rule which teaches that the best security for peace is a preparation for war, and he was thus at the mercy of every black ruffian who called himself a chief, and had some half-hundred other ruffians in his train. He had no warlike equipment, and his men would seem to have been the veriest set of cowards that were ever got together, even in tropical Africa. Some illustrations of this read comically enough now, though they could scarcely have appeared so at the time. On one occasion a solitary buffalo, taking a playful gallop over the plain, caused a general stampede: burdens, guns, everything that could im-

pede flight was thrown away, and the bearers with one consent sought safety up or behind the nearest trees.

On the 2nd of February they crossed the Sindi, the main southern branch of the Malagarazi, and which indeed is formed by the junction of every important tributary on the south. Its size appears to be quite equal to that of the northern branch, which Burton has spoken of as the Malagarazi itself, being so far in error that the Malagarazi which falls into the Tanganyika Lake is as much a southern as a northern stream, and drains the country to the south-east as well as to the north-east. The manner of crossing the Sindi, a deep stream a hundred yards wide, was peculiar. A dense vegetable growth, extending about three-quarters of a mile down the river, had covered the whole breadth, leaving only, on each side, a channel about two feet wide. This growth, becoming closely matted together and mixed up with earth and mud, in which different plants take root and twine into a compact mass, forms an island or bridge, over which one may walk safely, though with a feeling like stepping on a quaking bog. Such bridges continue to grow for about six years, when they are from three to four feet thick: they then begin to rot, and in about four years more they break up. In this latter stage of decay, while seeming still sound, they are very dangerous, and cases are on record of whole caravans, attempting to pass over them, being engulfed and lost. The bridge over the Sindi, however, held firm, and Cameron's party passed without accident.

A few days later, travelling in a northerly direction, they came to the northern branch of the Malagarazi, which, after a tedious dispute about the necessary payment, was crossed in canoes; and a march of nine days brought them to the eastern shore of Lake Tanganyika, where Cameron was able to take boat on to Ujiji, a distance of little more than an hour.

It will be remembered that Lake Tanganyika, the semi-mythical existence of which had been reported three centuries ago by Portuguese writers, was first authentically seen by Captain Burton on the 13th of February, 1858; and the peculiar features of its geography have been, ever since, the cause of much dispute, which is so far needless, as they cannot possibly be settled without actual and positive evidence. The all important question has been, and — notwithstanding all that has been done and said — still is,

whether the Tanganyika drains into Baker's Albert Nyanza, or not: in other words, is Tanganyika the head of the Nile? Burton, in 1858, taking boat at Ujiji, crossed over to the north-west, and sailed along some forty miles of its north-west coast to Uvira, beyond which his boatman refused to proceed. He had been told of a northerly outflow, but the information gathered at Uvira contradicted this, and named the Rusizé as flowing into the lake.

Owing to the imperfections of his instruments, Speke's observations, on this occasion, gave the height of the lake above sea-level as only eighteen hundred and fifty feet; and though this was suspected to be wrong from the first comparison of the instruments; and though, on the strength of this comparison, Mr. Findlay very positively laid down the height at twenty-eight hundred feet, a correction which was very generally accepted; it was not till Cameron visited the lake, with a mercurial barometer, that its height above sea-level was really established. According to his observations, it is twenty-seven hundred and ten feet, and there is no reason to doubt that that is approximately correct.

When Baker had found the level of the Albert Nyanza to be about twenty-seven hundred and twenty feet, an estimate which was supposed to err in excess, the very great importance of this question was at once felt; for if Findlay's correction of Speke's observation was to be received, the correspondence between the levels of the two lakes inevitably suggested the idea of a connection; and we do not think that the doubt on this point has yet been satisfactorily cleared up. And it is just this point on which the old problem of the Nile sources now hangs. We propose, therefore, to state what is really known about Lake Tanganyika, distinguishing it from what is only guessed at, or believed.

When the American traveller, Stanley, joined Livingstone at Ujiji, in November, 1871, Livingstone, speaking of the geography of Tanganyika, at first said that he had not the least doubt that the lake was connected with the Albert Nyanza by a river flowing out; basing his opinion on native reports, and still more on the current which he had observed constantly flowing northwards, past Ujiji, a northerly current which had been observed also by Burton, more especially near Uvira.

When, however, Livingstone was made to understand the importance which was attached in England to a search for the

outlet, he agreed to accompany Stanley to the north end of the lake. On arriving there, they found the shape to be very different from what it appears on Speke's map; the north coast running for about fourteen miles nearly west and east, and indented with bays two or three miles deep, which are separated from each other by sandy spits overgrown with cane grass. A stream, the mouth of which was hidden by the grass, to which they were guided by a fishing-canoe, and which they were told was the Rusizé, was found to flow *into* the lake, and they seem to have at once accepted the conclusion that this was the only opening. The other bays were examined in the most cursory manner, and some ten miles of coast-line in the north-east corner were looked at only from a distance.

We cannot therefore attach to this search, and the conclusion arrived at, the very great importance which Stanley and Mr. Waller, the editor of Livingstone's "Last Journals," have done. It is far from impossible, or even from improbable, that what appeared to be the end of the lake was but a false coast-line of vegetable growth, similar to what we have already described as choking the Sindi, a growth peculiar to this country, and to which we shall have again to refer. It is thus neither impossible nor improbable that behind a false coast an outlet lay hidden; and there is nothing particularly exceptional in the supposition that the outlet may be in the immediate neighborhood of an inlet. Not to speak of the Albert Nyanza, where the main stream enters and leaves the lake within a short distance, and without even going out of England, we have in Derwentwater a very striking illustration of our meaning. The Greta bursts violently into the lake at the very spot where the Derwent itself sluggishly flows out to Bassenthwaite; and that, too, through a channel which is sometimes so choked with weeds and water grass, that it might easily escape the notice of a careless observer in a boat on the lake.

On the other hand, the evidence which Baker gathered near the north end of the Albert Nyanza as to the existence of a connection between the two lakes, seems to us to be too strong to be easily disposed of. Sir Samuel Baker is quite competent to cross-examine even such accomplished liars as native Africans; and the very distinct testimony of *two* merchants — "that they had formerly travelled from one lake to the other by boats, but had ceased to perform the journey in that way, because

the canoes were too small to carry the ivory" — cannot be altogether put on one side.

Cameron's survey of Tanganyika Lake is much more satisfactory. As a naval officer and a trained observer, he had peculiar advantages; and by equipping a couple of boats at Ujiji, and sailing thence round the southern half of the lake, he was enabled to give us a map, which, so far as it goes, is the most perfect thing of the kind which has yet been attempted. His evidence, and more especially when collated with that of Captain Burton, may be regarded as establishing that Tanganyika is, in its origin, a volcanic cleft in the rocks, and not a mere basin of surface drainage, such as the Victoria Nyanza; that it is of great depth; and is surrounded, or nearly surrounded, by precipitous cliffs rather than mountains, of a height reaching up to two or three thousand feet above the water level; and that, in this southern part of the lake, there is no outlet or possibility of an outlet. His evidence is, therefore, peculiarly valuable when he states that about the middle of the western side, opposite to and some sixty miles south of Ujiji, is an outlet, which appears on his map as the Lukuga River, a name that it will probably hold, though he has proposed to call it after the Duchess of Edinburgh — the Marie Alexandrovna. The extreme importance of this discovery must be our excuse for pausing a moment on his exact statement.

About noon, on the 3rd of May, with a strong easterly wind, he arrived at the entrance of the Lukuga, which was found to be "more than a mile across, but closed by a grass-grown sandbank, with the exception of a channel three or four hundred yards wide," which also is partially choked by a sill, over which the depth is but one fathom. The chief of the district adjoining said "that the river was well known to his people, who often travelled for more than a month along its banks, until it fell into a larger river, the Lualaba." In company with this chief, Cameron went four or five miles down the river, until further progress was impossible, owing to masses of floating vegetation. "Here the depth was three fathoms; breadth, six hundred yards; current, one knot and a half, and sufficiently strong to drive us well into the edge of the vegetation."

There is no doubt whatever that, through this channel, at the time that Mr. Cameron was there, the water was flowing out of the lake. Cameron's nautical training renders it quite impossible that he should

be mistaken on such a point. But whether this outflow is permanent or not, is a totally different question, which unfortunately has not been answered. In his book, now published, Lieutenant Cameron has not expressed any doubt on this point, and has spoken of the Lukuga as a permanent outflowing stream; but in his earlier letters to the Geographical Society, he did express great doubt, and was inclined "to think that in the dry season, or when the lake is at its lowest level, little or no water leaves it."

He had intended to examine the Lukuga more closely. On the 9th of May, 1874, he wrote from Ujiji: "I propose buying three canoes, which will hold all I intend to take, and then, wherever that river goes, D.V., I go too." But six days later he had to write: "I have abandoned the idea of proceeding down the Lukuga, as such a journey would be most expensive, and require a very long time, as cutting the grass for a way would be hard work, and we should most likely require the assistance of the natives, for which one would have to pay heavily." Those who remember the account which Sir Samuel Baker has given of the obstruction which stopped his passage up the Nile, in 1870, or have read Colonel Long's account of how, in 1874, the "putrid mass of vegetable matter" was cut through by a battalion of Soudan soldiers, after a sickly and deadly work of three weeks, will the better understand the decisive nature of the obstacle which stopped Cameron.

As a matter of fact, then, the Lukuga was not examined. There is no proof that it is anything more than an overflow into an adjoining swamp; and there is, equally, no proof that it is not a river, and a very important branch of a great river system. Whatever conviction Lieutenant Cameron now has, it is not the result of observation, but is based on native testimony; as such it is, after all, still a matter of opinion; and on that there is little to be said, for mere opinion can never decide a point of geography.

The sluggishness of the stream might, indeed, seem to be proof that the Lukuga cannot be the outflow of such a body of water; but it is rightly enough answered that the outlet of great lakes is often extremely sluggish. On a smaller scale, we have already referred to the outlet of Derwentwater; and Mr. Clements Markham has instanced two similar cases—the Kirkaig and the Inver, on the west coast of Sutherlandshire. The Niagara itself issues from Lake Erie with a cur-

rent almost imperceptible, and it is difficult to observe the flow of the Nile as it leaves the Albert Nyanza; so that from the sluggishness of the stream no argument can fairly be drawn one way or the other.

If the natives' testimony is to be accepted, the Lukuga, flowing into the Lu-alaba, is a main branch of that river which, near the sea, we know as the Congo; and one piece of evidence in support of this, one to which perhaps sufficient weight has not been given, is that a Portuguese map, dated 1623, and now in the British Museum, shows one large lake—clearly Nyassa and Tanganyika combined, a pardonable enough mistake—with an outlet to the south-east, which we may identify with the Shire, flowing towards the Indian Ocean, and another outlet to the west, shown as a head stream of the Congo. We are perhaps too prone to refuse the very loose testimony of an inexact and unscientific age; but when we bear in mind that seventeen hundred years ago Ptolemy described the Nile as issuing from two lakes lying east and west of each other, lakes which we now know as the Victoria and Albert Nyanzas; and that the old map of two hundred and fifty years ago shows, with fair accuracy, what we know to be the course of the Shire, we cannot but attach some importance to its testimony as regarding the origin of the Congo.

But if the Lukuga is to be accepted as a veritable outlet of Tanganyika, does it necessarily follow that there is no outlet to the north, no connection with the Albert Nyanza, the lake so near, and so exactly on the same level? If there is no connection, the correspondence of level is an extraordinary freak of nature; and if there is a connection, then Tanganyika presents to us the very remarkable phenomenon of a lake with two outlets.

The opinion held by many geographers is that a lake with two outlets is absolutely unknown; but this opinion is certainly too sweeping, too comprehensive. There are, beyond doubt, lakes which, on authority more or less good, are said to have a double outlet—Lake Masanga (Colonel Long's Lake Ibrahim Pasha) is one of these; and the bifurcation of a river is by no means the very rare thing which it was long maintained to be. Strictly speaking, a river bifurcates at every island or eyot which lies in its stream: it is the mere accident of position which permits it to close again. Signor Gessi, an officer on the staff of

Colonel Gordon, in his account of the recent survey of the Albert Nyanza, has mentioned an important bifurcation of the Nile, a few miles north of its escape from the lake;* and we know of at least one instance which can be examined by any tourist in our own lake country. It is that of the stream which rises between Eel-Crags and Grasmoor. This for the most part, as the Liza Beck, runs west to join the Cocker and fall into Loweswater; but in wet weather it divides on the shoulder of Grasmoor, and sends off a branch eastwards, which falls into the Coledale Beck, and so into Bassen-thwaite.

Whilst, then, admitting the great probability of Cameron's Lukuga being really the outlet of Lake Tanganyika, and a head stream of the Congo, we cannot but regret that he was unable to establish it by eye-proof; failing which, we are not prepared to admit the impossibility of a northerly stream to the Albert Nyanza, and the more so, as the latest accounts from Mr. Stanley speak of an extension of that lake to the southward, far beyond what has lately been received on the report of Signor Gessi. We may fairly entertain a hope that Stanley, whose energy has recently done so much for African exploration, has by this time cleared up the question beyond all doubt; but we feel that that cannot be done except by actually passing between the two lakes, down the west side of Tanganyika to the Lukuga, and following it to its junction with the Lualaba, or elsewhere; and when that has been done, the sources of the Nile will be definitely known.

As it actually was, the different reports that Mr. Cameron was able to collect led him eventually to think that the Lukuga did flow into the Lualaba; and being unable, by reason of the obstructive growth, to follow it down in canoes, and learning that boats could be got without difficulty at Nyangwé, a position on the Lualaba which Livingstone had already determined, he resolved to make the best of his way thither. This he did, and after a journey of rather more than two months, through a country generally marshy, often wooded, sometimes beautiful, occasionally hilly, he arrived there on the third of August, 1874.

Space would fail us to speak at appropriate length of the difficulties of his route,

of the misadventures and hardships to which he was subjected, or of the disgusting abominations with which he was made familiar. If we make especial mention of one of these last, it is not so much on account of its horrible nature, as of its peculiarity. In the history of savage life we do not remember any custom at all approaching one which is now recorded of a tribe in Manyúéma, near the River Luama, subject to a chief, Moéné Booté. These people are described as very affectionate among themselves, and decidedly more prolific than any race in that part of the country; but also, as being not only cannibals, but "most filthy cannibals."

The horrors of ordinary cannibalism, as exercised on the carcasses of enemies slain in fight, are too familiar to call for remark. They have in them a certain ferocity of hatred that seems not out of place in the savage; neither does the practice appear to be opposed to the best traits of savage nature, and is, in fact, in vogue amongst those tribes which in many respects excel in manly dignity and capability of receiving instruction, the Maoris of New Zealand, and the Nyam-nyams, as lately described by Colonel Long. But the abominations habitual to the people of Manyúéma are, we believe and trust, without a parallel on the face of the earth. "Not only," writes Cameron, "do they eat the bodies of enemies killed in battle, but also of people who die of disease. They prepare the corpses by leaving them in running water until they are nearly putrid, and then devour them without any further cooking. They also eat all sorts of carrion, and their odor is very foul and revolting." Assuredly the story of anthropology has disagreeable features from which the study of geography is free. We will endeavor to wash away the foul taint.

The very remarkable water system which stretches through some eight degrees of latitude, or about five hundred miles to the south of Nyangwé, has been described at great length in Livingstone's "Last Journals;" and if we are at all to accept the interpretation of it as shown in the map published with them, and referred to Livingstone's own observations, or in the very clear little map by Mr. Turner, of the Royal Geographical Society, which accompanies Commander Cameron's book, Lake Bangwéolo, with a height above sea-level estimated by Livingstone as three thousand six hundred and eighty-eight feet, is the real origin of the Congo; although, of course, the remote heads of such streams as the Chambezi would more

* This bifurcation, as well as the second outlet of Lake Masanga, is shown in the map published in the last number of the Proceedings of the Royal Geographical Society, vol. xxi., p. 56.

properly be called its sources. And though much of these maps is hypothetical, or based on the always doubtful testimony of natives, the whole seems to agree so well with what has been definitely established, that Mr. Turner's map may, we think, be provisionally accepted as a fair representation of the country, and as the base of future examination. But a country which is such a confused network of bogs and rivers, a country which Livingstone finds no other name for than "sponge," is not a country to tempt the traveller. And as, with all the promise of central Africa, this particular bit of it can scarcely be a land of either commerce, or mining, or agriculture, it will assuredly be left to the mere explorer for many years to come.

For the explorer, however, there is still plenty to do before we can know, and not merely guess at, even the main features of this extraordinary river system. That Cameron's Lukuga, if a river at all, is a tributary of the Lualaba, is almost certain; but the Lualaba itself flows away into the unknown. Cameron, collating much hearsay evidence at Nyangwé and other places on the Lualaba and its known tributaries, came to the conclusion that it certainly was the Congo. Livingstone, it is well known, held to the last the opinion that it was the Nile; but that, at any rate, is positively disproved, for the level at Nyangwé, as measured by Cameron, is a hundred feet or more lower than that at Gondokoro, and it is very well established that below that point, the Nile, or rather the Bahr-el-Abiad, receives no important tributary from the west; whilst the Lualaba at Nyangwé is a larger stream, and carries down five times more water than the Nile itself at Gondokoro. Where else than in the Congo, Cameron fairly argues, could such a volume of water find an outlet? Where else than from the Lualaba and its congeners could such a volume of water as the Congo pours into the Atlantic be collected?

So far as argument has anything to do with a geographical question, we would entirely agree with Lieutenant Cameron; but unfortunately he was compelled to give up his idea of following the river down, and the certainty of actual discovery remains for some successor who may be more fortunate or less scrupulous than he was; and meantime there are those who maintain—and an adventurous German naturalist, Dr. Pogge, after travelling far to the south and collecting the evidence of natives of Ulunda, has quite lately

maintained before the Geographical Society of Berlin—that the Lualaba has nothing whatever to do with the Congo, and that the main head of that river is the Kasai or Kassabé, which is marked in Mr. Turner's map as joining the Lualaba in Lake Sankorra. As to the Lualaba, Dr. Pogge has no definite opinion, but thinks that it may possibly appear on the seaboard as the Ogovai. This seems to us as nearly an impossibility as any piece of unknown geography can be; for the volume of the Ogovai does not correspond to that of its reputed tributary nearly two thousand miles away; and, however unwillingly, we would prefer believing in the hypothetical inland and salt-water sea of Caspian-like dimensions. But we will not, we absolutely refuse to believe in any such thing, without further demonstration. And it seems to us that, so far as the Lualaba is concerned, Dr. Pogge, collecting native evidence at a distance, was at a disadvantage as compared with Lieutenant Cameron collecting evidence at Nyangwé, actually on the Lualaba.

Let us then consider what this evidence of Cameron's amounts to. That the Lualaba, flowing past Nyangwé, continues its course in a westerly direction; that it is joined by three large rivers coming from the north, the Lilwa, the Lindi, the Loma, this last-named being as large as the Lualaba itself; that from the south it receives an important tributary, the Lomâmi; that the river, thus swollen to about three times its volume at Nyangwé, enters a large lake, Sankorra, at a distance of some two or two hundred and fifty miles to the westward; that there is communication, more or less direct, between Lake Sankorra and the west coast, as is absolutely proved by the cloth and beads which had been brought from there, which Cameron actually saw, and which were distinctly different from the cloth and beads of the east coast; whilst the directness of this communication is implied in the report that these were brought to Sankorra by traders "wearing hats and trowsers, and having boats with two masts."

But Cameron's desire to explore the Lualaba from Nyangwé, or to visit Lake Sankorra, was fruitless. At Nyangwé, he could not get canoes, and he decided to go with an Arab trader, Tipo-tipo, to his camp, ten marches off, on the Lomâmi, from whence, according to Tipo, he would have no difficulty about procuring guides, crossing the Lomâmi, and marching to the lake. But at Tipo's camp things wore a

less favorable aspect. There was, as we have just said, no doubt about the traffic with some place that the natives agreed in calling Lake Sankorra, and through it, with the west coast; but the chief of the intervening country positively refused to allow Cameron to pass. No strangers with guns, he said, had ever passed through his country, and none should, without fighting their way.

Cameron's resolve in this most difficult and disappointing position was worthy of his country and the service to which he belongs. We state it emphatically in his own words: "Although I could have obtained sufficient men from Nyangwé and Tipó-tipo to have easily fought my way through, I recognized it as my duty not to risk a single life unnecessarily, for I felt that the merit of any geographical discovery would be irretrievably marred by shedding a drop of native blood, except in self-defence."

It is to this resolve, which the country with one voice has approved, that the partial failure of this part of Cameron's journey is alone to be attributed. That he could have passed through, had he made up his mind to do so, we see no reason to doubt; that the conclusion he came to was painful, is certain; but Lieutenant Cameron's training had been that of a service whose traditions all teach the sacredness of duty, and to the dictates of duty he now sacrificed his long hopes.

Other travellers, following after him, and reaping the benefit of his moderation, may possibly succeed where he has failed; but we are quite sure that even the most complete geographical success will be coldly received if it is won by a violation of what we, in England, have learned to consider the laws of humanity.

We have stated Cameron's evidence with regard to the Lualaba; but the Kassabé runs altogether out of his country, and though he afterwards passed by and amongst its sources, far to the south, he has nothing to tell us of its course. But that the Kassabé, from the very first a river of great volume, draining, as it goes on, a wide tract of wet country, is a main feeder of the Congo, has never, we believe, been doubted, and certainly not by Livingstone or Cameron; although "a Portuguese," writing to the *Times*, in apparent ignorance of all that Livingstone and Cameron have done, has spoken of the connection of the Kassabé with the Congo as a thing unthought of by either of these travellers.

From a statistical point of view, so far

as our information goes, the case stands thus. The discharge at the mouth of the Congo is estimated at about two million cubic feet per second. Cameron estimates the volume of the Lualaba at Nyangwé, during the dry season, as one hundred and twenty-three thousand cubic feet per second, which we may perhaps consider as equivalent to an average of one hundred and fifty thousand. The northern tributaries which Cameron heard of, together with the Lomâmi, may treble this; so that the Lualaba may be supposed to pour into Lake Sankorra about five hundred thousand cubic feet per second. If the Kassabé does as much, its volume is enormous; and the remaining million which the Congo discharges must come from the Kwango, which drains the whole country east of Angola for many hundreds of miles, and from other, probably northern sources, as yet unknown.

We would thus say decidedly that we prefer the river system, as laid down by Cameron, to any other yet before us; and we accept it provisionally, waiting none the less eagerly for the more certain solution of the problem, which may perhaps be given us, ere long, by Mr. Stanley, if he should have resolved to go west, as, in his last letters, he spoke of doing.

From Tipó's camp on the Lomâmi, Cameron decided to take a southerly route: there seemed a possibility of his being yet able to turn to the north-west and strike Lake Sankorra; and whether or not, it was, from there, the only way open to him; besides which, the evidence was convincing that Kilemba, the residence of Kasongo, chief or king of Urua, the country he was now in, was visited by Portuguese traders, through whom he would, at the worst, be able to reopen a communication with the civilized world. To Kilemba he accordingly went. The chief, Kasongo, was absent from his capital, and the government, such as it was, was meantime carried on by his favorite wife, Fuméa-Kenna, who received Cameron with flattering attention, in which curiosity played a great part, but who, nevertheless, refused to let him go on until Kasongo returned.

Meanwhile he met, and became associated with, a certain José Antonio Alvez, one of the Portuguese traders of whom he had heard so much. He had almost taken for granted that Alvez was a white man: great, therefore, was his disappointment when he turned out to be an ugly old negro, and though dressed in very dirty European garments, and speaking Portu-

guese, to have but a very small degree of civilization. Unprincipled scoundrel as Alvez no doubt was, we think that this disappointment has made Mr. Cameron's estimate unduly harsh, or, rather, has inclined him to judge by a civilized standard; but if we were to consider Alvez as a negro, his conduct seems to have been more humane than that of his fellows; and the small tincture of civilization, which had in some respects given point to his vices, had also rendered him more sensible to his own interests, and able to see that he might make a good thing out of Cameron, whose stores were running short, and who was thus in a position of some difficulty. He agreed to conduct Cameron to Loanda or Benguela, of course "for a consideration," which the necessities of Cameron's party enabled him to fix proportionately high. Lieutenant Cameron, from his personal point of view, naturally enough considers this as a most dishonest and rascally extortion, which none but a ruffian such as Alvez would have attempted; but we fear that making capital out of the needs of business acquaintance is not altogether a peculiarity of the dirty old Portuguese negro.

But, independent of this, Alvez was, by the habit and trade of a long life, a traveller through that part of the country: he must have been comparatively well acquainted with the topography of it, and may perhaps have spoken a little truth where he had no special interest to lie. So far as his evidence is worth anything, he knew Lake Sankorra by hearsay, but had never been to it. Some of his men had gone within a few days of it, but they had found no ivory and had turned back: the road by which they went was practicable only in the dry season, for it led across wide plains which were intersected by numerous rivers, and which, in the rainy season, were converted into swamps.

Not the least interesting or important part of the geography of this country would be an examination into its meteorology; but on this point Lieutenant Cameron has given us nothing more than a few accidental hints. Strange omission for a sailor, he has scarcely once mentioned the word *wind*; he has barely alluded to a distinction between the wet and dry seasons, and has made no attempt to connect changes of season and changes of weather with each other. This is a most serious omission, and we would express a hope that it is due to an unwillingness to interrupt a popular narrative — though the book professes, indeed, to be something

more — with scientific details, rather than to any want of material; and that we may therefore have, at some future time, exact information on this point, with regard to which our knowledge is very defective.

That the rainfall in the interior of Africa to the west of Tanganyika, and from 14° S. to the equator, is excessive, is evident; but the point left in doubt, and which if settled would clear up some very interesting questions with regard to atmospheric circulation, is, where does this rain come from? It is a meteorological axiom, of which some writers are curiously ignorant, that any such rainfall must come from the sea: but from which sea does this come? from the Atlantic or Indian Ocean? from the northern or southern hemisphere? Cameron leaves us quite in the dark; Livingstone does the same; Burton only, of south African travellers, has noticed the problem, and has done so rather with the assumption that the rainfall which drains into Tanganyika comes from the South Indian Ocean, borne inland by the south-east trade. But in the absence of any observations to confirm this view, we doubt it, and for this reason; that during the months from October to March, between which the rainy season lies, and more especially in January, the south-east trade of the South Indian Ocean does not blow home to the African coast, and over a great part of the tropical belt of that sea gives place to the middle or north-west monsoon. And, besides, there is between the east coast and the low land to the west of Tanganyika a range of high land, from four to five thousand feet above sea-level, which would, which must, intercept any rain-bearing currents of air. And when we further consider that during these months a wet wind from south-west does blow home to the Atlantic coast of inter-tropical south Africa, bringing the rainy season all along the coast from the equator southwards, and especially near the mouth of the Congo, we are inclined to believe that the rain which feeds the sources and affluents of such streams as the Lualaba or the Kassabé is derived from the South Atlantic Ocean, and is borne inland on this south-west wind, which, curling back on itself, will appear as a north-westerly, northerly, or even north-easterly wind. On this point the evidence of Lieutenant Cameron would have an important bearing, and it is much to be regretted that he has altogether passed it by.

Whilst detained at Kilemba, awaiting Kasongo's return, Cameron visited the neighboring Lake Mohrya, which is of but

small extent, but noticeable as the home of a lake tribe, who build on piles. There does not seem to be any particular reason why they should live in this manner, for, though distrustful of strangers, they are on friendly terms with the dwellers on the shore; but they had a monopoly of the canoes, and declined to let the white man come near them.

As Kasongo was still away when he got back from this excursion, he was allowed to make another to Lake Kassali, through which flows one of the main branches of the Lualaba; and it is to this, and the information collected during his tedious detention at Kilemba, that we owe not only the very important contributions to our geographical knowledge of this remarkable river system, but a most interesting and valuable account of the vast territory of Urua, extending over some one hundred thousand square miles, and subject to Kasongo, a chief to whom the sense of absolute power has given perhaps a certain dignity, and whose relative wealth permits a certain degree of rude luxury, but who is described as a brutal, ignorant, and sensual savage.

When Kasongo at last returned, he was accompanied by Coimbra, a mongrel negro and slave-driver of the worst description, who was closely associated with Alvez in many atrocities connected with that loathsome trade, the horrors of which cannot be related without repeating a great part of the volumes now before us. It is enough to say, that after being detained at Kilemba for nearly nine months, and having endeavored in vain to get back to what he believed to be the line of the Congo, Cameron was at last compelled to start as the vassal, rather than the companion, of Alvez and the more bestial Coimbra; and from June, 1875, travelled with them in a south-westerly direction, through a country naturally rich and fertile, but devastated by the atrocities which he could not avoid witnessing, and which he was powerless to prevent. Nor was it till they reached Alvez's settlement in Bihé, that he was able to leave them, Alvez selling him, for bills at an extortionate rate, such stores as he was obliged to purchase.

From Bihé to the sea is less than two hundred miles, and it is worthy of notice that in this last short distance, over a route not unknown, Mr. Cameron incurred his most serious danger. His stores ran out, his people were exhausted, and on the point of dying of starvation. The situation was critical, and, as a last desperate resource,

he determined to leave the bulk of his party, with all his possessions, except the instruments and journals; and, with a few picked men, make a forced march to the coast, from whence he could send back assistance; and in this way he did achieve safety and success.

Of his reception at Katombela and Benguella, as later on at Loanda and in England, it is needless here to speak: nor indeed does the limited space at our disposal permit us to do more than allude to the many interesting and important points which are related in detail by Lieutenant Cameron. Of these, the sketches that he gives of native customs are perhaps the most interesting, and his ideas of a possible traffic the most important. As closely connected with these are his contributions to the science of physical geography; and if in this article we have dwelt more fully on these geographical considerations, it is that they seem to us to influence the whole, and, as such, to have claims superior to all others, as tending, more than any other one set can do, to elucidate the great problems which the wishes of civilization and Christianity would propound.

THE MARQUIS OF LOSSIE.

BY GEORGE MACDONALD, AUTHOR OF
"MALCOLM," ETC.

CHAPTER XLVII.

PORTLOSSIE AND SCAURNOSE.

MEANTIME, things were going rather badly at Portlossie and Scaurnose, and the factor was the devil of them. Those who had known him longest said he must be *fey*—that is *doomed*—so strangely altered was his behavior. Others said he took more counsel with his bottle than had been his wont, and got no good from it. Almost all the fishers found him surly, and upon some he broke out in violent rage, while to certain whom he regarded as Malcolm's special friends he carried himself with cruel oppression. The notice to leave at midsummer clouded the destiny of Joseph Mair and his family, and every householder in the two villages believed that to take them in would be to call down the like fate upon himself. But Meg Partan at least was not to be intimidated. Her outbursts of temper were but the hurricanes of a tropical heart—not much the less true and good and steadfast that it

was fierce. Let the factor rage as he would, Meg was absolute in her determination that if the cruel sentence were carried out — which she hardly expected — her house should be the shelter of those who had received her daughter when her severity had driven her from her home. That would leave her own family and theirs three months to look out for another abode. Certain of Blue Peter's friends ventured a visit of intercession to the factor, and were received with composure and treated with consideration until their object appeared, when his wrath burst forth so wildly that they were glad to escape without having to defend their persons: only the day before had he learned with certainty from Miss Horn that Malcolm was still in the service of the marchioness, and in constant attendance upon her when she rode. It almost maddened him. He had for some time taken to drinking more toddy after his dinner, and it was fast ruining his temper. His wife, who had from the first excited his indignation against Malcolm, was now reaping her reward. To complete the troubles of the fisher-folk, the harbor at Portlossie had, by a severe equinoctial storm, been so filled with sand as to be now inaccessible at lower than half tide, nobody as yet having made it his business to see it attended to.

But in the midst of his anxieties about Florimel and his interest in Clementina, Malcolm had not been forgetting them. As soon as he was a little settled in London he had written to Mr. Soutar, and he to architects and contractors, on the subject of a harbor at Scaurnose. But there were difficulties, and the matter had been making but slow progress. Malcolm, however, had insisted, and in consequence of his determination to have the possibilities of the thing thoroughly understood, three men appeared one morning on the rocks at the bottom of the cliff on the west side of the Nose. The children of the village discovered them, and carried the news; whereupon the men being all out in the bay, the women left their work and went to see what the strangers were about. The moment they were satisfied that they could make nothing of their proceedings, they naturally became suspicious. To whom the fancy first occurred nobody ever knew, but such was the unhealthiness of the moral atmosphere of the place, caused by the injustice and severity of Mr. Crathie, that, once suggested, it was universally received that they were sent by the factor, and that for a purpose only

too consistent with the treatment Scaurnose, they said, had invariably received ever since first it was the dwelling of fishers. Had not their fathers told them how unwelcome they were to the lords of the land? And what rents had they not to pay! and how poor was the shelter for which they paid so much! — without a foot of land to grow a potato in! To crown all, the factor was at length about to drive them in a body from the place — Blue Peter first, one of the best as well as most considerable men amongst them! His notice to quit was but the beginning of a clearance. It was easy to see what those villains were about — on that precious rock, their only friend, the one that did its best to give them the sole shadow of harborage they had, cutting off the wind from the north-east a little, and breaking the eddy round the point of the Nose! What *could* they be about but marking the spots where to bore the holes for the blasting-powder that should scatter it to the winds, and let death and destruction and the wild sea howling in upon Scaurnose, that the cormorant and the bittern might possess it, the owl and the raven dwell in it? But it would be seen what their husbands and fathers would say to it when they came home! In the mean time, they must themselves do what they could. What were they men's wives for, if not to act for their husbands when they happened to be away?

The result was a shower of stones upon the unsuspecting surveyors, who forthwith fled, and carried the report of their reception to Mr. Soutar at Duff Harbor. He wrote to Mr. Crathie, who till then had heard nothing of the business; and the news increased both his discontent with his superiors and his wrath with those whom he had come to regard as his rebellious subjects. The stiff-necked people of the Bible was to him always now, as often as he heard the words, the people of Scaurnose and the Seaton of Portlossie. And having at length committed this overt outrage, would he not be justified by all in taking more active measures against them?

When the fishermen came home and heard how their women had conducted themselves, they accepted their conjectures and approved of their defence of the settlement. It was well for the land-louper, they said, that they had only the women to deal with.

Blue Peter did not so soon hear of the affair as the rest, for his Annie had not been one of the assailants. But when the

hurried retreat of the surveyors was described to him in somewhat graphic language by one of those concerned in causing it, he struck his clenched fist in the palm of his other hand, and cried, "Weel saired! There! that's what comes o' yer new —"

He had all but broken his promise, as he had already broken his faith, to Malcolm, when his wife laid her hand on his mouth and stopped the issuing word. He started with sudden conviction, and stood for a moment in absolute terror at sight of the precipice down which he had been on the point of falling, then straightway excusing himself to his conscience on the ground of non-intent, was instantly angrier with Malcolm than before. He could not reflect that the disregarded cause of the threatened sin was the greater sin of the two. The breach of that charity which thinketh no evil may be a graver fault than a hasty breach of promise.

Peter had not been improving since his return from London. He found less satisfaction in his *religious exercises*; was not unfrequently clouded in temper, occasionally even to sullenness; referred things oftener than formerly to the vileness of the human nature, but was far less willing than before to allow that he might himself be wrong; while somehow the Bible had no more the same plenitude of relation to the wants of his being, and he rose from the reading of it unrefreshed. Men asked each other what had come to Blue Peter, but no one could answer the question. For himself, he attributed the change which he could not but recognize, although he did not understand it, to the withdrawing of the spirit of God, in displeasure that he had not merely allowed himself to be inveigled into a playhouse, but, far worse, had enjoyed the wickedness he saw there. When his wife reasoned that God knew he had gone in ignorance, trusting his friend, "What's that to him," he cried, "wha judges richteous judgment? What's a' oor puir meeserable excuzes i' the een 'at can see throu' the wa's o' the hert? Ignorance is no innocence."

Thus he lied for God, pleading his cause on the principles of hell. But the eye of his wife was single, and her body full of light: therefore to her it was plain that neither the theatre nor his conscience concerning it was the cause of the change: it had to do with his feelings toward Malcolm. He wronged his friend in his heart—half knew it, but would not own it. Fearing to search himself, he

took refuge in resentment, and to support his hard judgment put false and cruel interpretations on whatever befell. So that, with love and anger and wrong unacknowledged, his heart was full of bitterness.

"It's a' the drumblent (*muddled, troubled*) luvie o' 'im!" said Annie to herself. "Puir fallow! gien only Ma'colm wad come hame an' lat him ken he's no the villain he taks him for! I'll no believe mysel' 'at the laad I kissed like my ain mither's son afore he gaed awa' wad turn like that upo' 's maist the meenute he wat oot o' sicht, an' a' for a few words about a fulish playactin'. Lord bliss us a'! markisses is men! — We'll see, Peter, my man," she said, when the neighbor took her leave, "whether the wife, though she hasna been to the ill place — an' that's surely Lon'on — canna tell the true frae the fause full better nor her man 'at kens sae muckle mair nor she wants to ken! Lat sit an' lat see."

Blue Peter made no reply; but perhaps the deepest depth in his fall was that he *feared* his wife might be right, and he have one day to stand ashamed before both her and his friend. But there are marvellous differences in the *quality* of the sins of different men, and a noble nature like Peter's would have to sink far indeed to be beyond a ready redemption. Still, there was one element mingling with his wrongness whose very triviality increased the difficulty of long-delaying repentance: he had been not a little proud at finding himself the friend of a marquis. From the first they had been friends, when the one was a youth and the other a child, and had been out together in many a stormy and dangerous sea. More than once or twice, driven from the churlish ocean to the scarce less inhospitable shore, they had lain all night in each other's arms to keep the life awake within their frozen garments. And now this marquis spoke English to him! It rankled.

All the time Blue Peter was careful to say nothing to injure Malcolm in the eyes of his former comrades. His manner when his name was mentioned, however, he could not honestly school to the conveyance of the impression that things were as they had been betwixt them. Folk marked the difference, and it went to swell the general feeling that Malcolm had done ill to forsake a seafaring life for one upon which all fishermen must look down with contempt. Some in the Seaton went so far in their enmity as even to hint

an explanation of his conduct in the truth of the discarded scandal which had laid Lizzy's child at his door.

But amongst them was one who, having wronged him thus, and been convinced of her error, was now so fiercely his partisan as to be ready to wrong the whole town in his defence: that was Meg Partan, properly Mistress Findlay, Lizzy's mother. Although the daughter had never confessed, the mother had yet arrived at the right conclusion concerning the father of her child — how, she could hardly herself have told, for the conviction had grown by accretion: a sign here and a sign there, impalpable save to maternal sense, had led her to the truth; and now, if any one had a word to say against Malcolm, he had better not say it in the presence of the Partaness.

One day Blue Peter was walking home from the upper town of Portlossie, not with the lazy gait of the fisherman off work, poised backward with hands in trouser-pockets, but stooping care-laden with listless swinging arms. Thus Meg Partan met him, and of course attributed his dejection to the factor: "Deil hae 'im for an upsettin' rascal 'at hasna pride enouch to haud him ohnlickit the gentry's shune! The man maun be fey! I houp he may, an' I wuss I saw the beerial o' 'im makin' for the kirkyaird. It's nae ill to wuss weel to a' body 'at wad be left! His nose is turnt twice the color i' the last twa month. He'll be drinkin' byous. Gien only Ma'colm MacPhail had been at hame to haud him in order!"

Peter said nothing, and his silence, to one who spoke out whatever came, seemed fuller of restraints and meanings than it was. She challenged it at once: "Noo, what mean ye by sayin' naething, Peter? Guid kens it's the warst thing man or woman can say o' onybody to haud t'heir tongue. It's a thing I never was blamed wi' mysel', an' I wadna du't."

"That's verra true," said Peter.

"The mair weicht's intill't whan I layt 't to the door o' anither," persisted Meg. "Peter, gien ye hae onything again' my freen', Ma'colm MacPhail, oot wi' t' like a man, an' no playac' the gunpoother plot ower again. Ill wull's the warst poother ye can lay i' the boddom o' ony man's boat. But say 'at ye like, I s' uphaud Ma'colm again' the haill poustie o' ye. Gien he was but here! I say't again, honest laad!"

But she could not rouse Peter to utterance, and losing what little temper she

had, she rated him soundly, and sent him home saying with the prophet Jonah, "Do I not well to be angry?" for that also he placed to Malcolm's account. Nor was his home any more a harbor for his riven boat, seeing his wife only longed for the return of him with whom his spirit chode: she regarded him as an exiled king, one day to reappear and justify himself in the eyes of all, friends and enemies.

CHAPTER XLVIII.

TORTURE.

THOUGH unable to eat any breakfast, Malcolm persuaded himself that he felt nearly as well as usual when he went to receive his mistress's orders. Florimel had had enough of horseback, indeed, for several days to come, and would not ride. So he saddled Kelpie, and rode to Chelsea to look after his boat. To get rid of the mare, he rang the stable-bell at Mr. Lenorme's and the gardener let him in. As he was putting her up, the man told him that the housekeeper had heard from his master. Malcolm went to the house to learn what he might, and found to his surprise, that if he had gone on the Continent he was there no longer, for the letter, which contained only directions concerning some of his pictures, was dated from Newcastle, and bore the Durham postmark of a week ago. Malcolm remembered that he had heard Lenorme speak of Durham Cathedral, and in the hope that he might be spending some time there, begged the housekeeper to allow him to go to the study to write to her master. When he entered, however, he saw something that made him change his plan, and having written, instead of sending the letter, as he had intended, enclosed to the postmaster at Durham, he left it upon an easel. It contained merely an earnest entreaty to be matle and kept acquainted with his movements, that he might at once let him know if anything should occur that he ought to be informed concerning.

He found all on board the yacht in shipshape, only Davy was absent. Travers explained that he sent him on shore for a few hours every day. He was a sharp boy, he said, and the more he saw the more useful he would be, and as he never gave him any money, there was no risk of his mistaking his hours.

"When do you expect him?" asked Malcolm.

"At four o'clock," answered Travers.

"It is four now," said Malcolm.
A shrill whistle came from the Chelsea shore.

"And there's Davy," said Travers.
Malcolm got into the dinghy and rowed ashore.

"Davy," he said, "I don't want you to be all day on board, but I can't have you be longer away than an hour at a time."

"Ay, ay, sir," said Davy.

"Now attend to me."

"Ay, ay, sir."

"Do you know Lady Lossie's house?"

"No, sir, but I ken hersel'."

"How is that?"

"I hae seen her mair nor twa or three times ridin' wi' yersel' to yon hoose yon'er."

"Would you know her again?"

"Ay wad I—fine that. What for no, sir?"

"It's a good way to see a lady across the Thames and know her again."

"Ow! but I tuik the spy-glass till her," answered Davy, reddening.

"You are sure of her, then?"

"I am that, sir."

"Then come with me, and I will show you where she lives. I will not ride faster than you can run. But mind you don't look as if you belonged to me."

"Na, na, sir. There's fowk takin' notice."

"What do you mean by that?"

"There's a wee laddie been efter mysel' twice or thrice."

"Did you do anything?"

"He wasna big enouch to lick, sae I jist got him the last time an' pu'd his niz, an' I dinna think he'll come efter me again."

To see what the boy could do, Malcolm let Kelpie go at a good trot, but Davy kept up without effort, now shooting ahead, now falling behind, now stopping to look in at a window, and now to cast a glance at a game of pitch-and-toss. No mere passer-by could have suspected that the sailor-boy belonged to the horseman. He dropped him not far from Portland Place, telling him to go and look at the number, but not stare at the house.

All the time he had had no return of the sickness, but, although thus actively occupied, had felt greatly depressed. One main cause of this was, however, that he had not found his religion stand him in such stead as he might have hoped. It was not yet what it must be to prove its reality. And now his eyes were afresh opened to see that in his nature and thoughts lay large spaces wherein God ruled not supreme—desert places where

who could tell what might appear? For in such regions wild beasts range, evil herbs flourish, and demons go about. If in very deed he lived and moved and had his being in God, then assuredly there ought not to be one cranny in his nature, one realm of his consciousness, one wellspring of thought, where the will of God was a stranger. If all were as it should be, then surely there would be no moment, looking back on which he could not at least say,—

Yet, like some sweet beguiling melody—
So sweet, we know not we are listening to it—
Thou, the mean while, was blending with my thought,
Yea, with my life and life's own secret joy!

"In that agony o' sickness, as I sat upo' the stair," he said to himself—for still in his own thoughts he spoke his native tongue—"whaur was my God in a' my thoughts? I did cry till 'im, I min' weel, but it was my reelin' brain an' no my trustin' hert 'at cried. Aih me! I doobt gien the Lord war to come to me noo, he wadna fin' muckle faith i' my pairt o' the yerth. Aih! I wad like to lat him see something like lippenin'! I would fain trust him till his hert's content. But I doobt it's only speertual ambeetion, or better wad hae come o' 't by this time. Gien that sickness come again, I maun see, noo 'at I'm forewarned o' my ain wake-ness, what I can du. It maun be something better nor last time, or I'll tine hert a'thegither. Weel, maybe I need to be heumblent. The Lord help me!"

In the evening he went to the school-master, and gave him a pretty full account of where he had been and what had taken place since last he saw him, dwelling chiefly on his endeavors with Lady Clementina.

From Mr. Graham's lodging to the north-eastern gate of the Regent's Park the nearest way led through a certain passage, which, although a thoroughfare to persons on foot, was little known. Malcolm had early discovered it, and always used it. Part of this short cut was the yard and back premises of a small public-house. It was between eleven and twelve as he entered it for the second time that night. Sunk in thought and suspecting no evil, he was struck down from behind and lost his consciousness. When he came to himself he was lying in the public-house, with his head bound up and a doctor standing over him, who asked him if he had been robbed. He searched his pockets and found that his old watch was gone, but his money left. One of the men

standing about said he would see him home. He half thought he had seen him before, and did not like the look of him, but accepted the offer, hoping to get on the track of something thereby. As soon as they entered the comparative solitude of the park he begged his companion, who had scarcely spoken all the way, to give him his arm, and leaned upon it as if still suffering, but watched him closely. About the middle of the park, where not a creature was in sight, he felt him begin to fumble in his coat-pocket and draw something from it. But when, unresisted, he snatched away his other arm, Malcolm's fist followed it, and the man fell, nor made any resistance while he took from him a short stick loaded with lead, and his own watch, which he found in his waistcoat pocket. Then the fellow rose with apparent difficulty, but the moment he was on his legs ran like a hare, and Malcolm let him run, for he felt unable to follow him.

As soon as he reached home he went to bed, for his head ached severely; but he slept pretty well, and in the morning flattered himself he felt much as usual. But it was as if all the night that horrible sickness had been lying in wait on the stair to spring upon him; for the moment he reached the same spot on his way down, he almost fainted. It was worse than before: his very soul seemed to turn sick. But although his heart died within him, somehow, in the confusion of thought and feeling occasioned by intense suffering, it seemed while he clung to the balusters as if with both hands he were clinging to the skirts of God's garment, and through the black smoke of his fainting his soul seemed to be struggling up toward the light of his being. Presently the horrible sense subsided as before, and again he sought to descend the stair and go to Kelpie. But immediately the sickness returned, and all he could do after a long and vain struggle was to crawl on hands and knees up the stairs and back to his room. There he crept upon his bed, and was feebly committing Kelpie to the care of her Maker, when consciousness forsook him.

It returned, heralded by frightful pains all over his body, which by-and-by subsiding, he sunk again to the bottom of the black Lethe.

Meantime, Kelpie had got so wildly uproarious that Merton tossed her half a truss of hay, which she attacked like an enemy, and ran to the house to get somebody to call Malcolm. After what seemed endless delay the door was opened by his

admirer, the scullery-maid, who, as soon as she heard what was the matter, hastened to his room.

CHAPTER XLIX.

THE PHILTRE.

BEFORE he came again to himself Malcolm had a dream, which, although very confused, was in parts more vivid than any he had ever had. His surroundings in it were those in which he actually lay, and he was ill, but he thought it the one illness he had before. His head ached, and he could rest in no position he tried. Suddenly he heard a step he knew better than any other approaching the door of his chamber; it opened, and his grandfather in great agitation entered, not following his hands, however, in the fashion usual to blindness, but carrying himself like any sight-gifted man. He went straight to the washstand, took up the water-bottle, and with a look of mingled wrath and horror dashed it on the floor. The same instant a cold shiver ran through the dreamer, and his dream vanished. But instead of waking in his bed, he found himself standing in the middle of the floor, his feet wet, the bottle in shivers about them, and, strangest of all, the neck of the bottle in his hand. He lay down again, grew delirious, and tossed about in the remorseless persecution of centuries. But at length his tormentors left him, and when he came to himself he knew he was in his right mind.

It was evening, and some one was sitting near his bed. By the light of the long-snuffed tallow candle he saw the glitter of two great black eyes watching him, and recognized the young woman who had admitted him to the house the night of his return, and whom he had since met once or twice as he came and went. The moment she perceived that he was aware of her presence she threw herself on her knees at his bedside, hid her face and began to weep. The sympathy of his nature rendered yet more sensitive by weakness and suffering, Malcolm laid his hand on her head and sought to comfort her. "Don't be alarmed about me," he said: "I shall soon be all right again."

"I can't bear it," she sobbed. "I can't bear to see you like that, and all my fault."

"Your fault! What can you mean?" said Malcolm.

"But I did go for the doctor, for all it may be the hanging of me," she sobbed. "Miss Caley said I wasn't to, but I would

and I did. They can't say I meant it—can they?"

"I don't understand," said Malcolm feebly.

The doctor says somebody's been an' p'isoned you," said the girl with a cry that sounded like a mingled sob and howl; "an' he's been a-pokin' of all sorts of things down your poor throat." And again she cried aloud in her agony.

"Well, never mind: I'm not dead, you see, and I'll take better care of myself after this. Thank you for being so good to me: you've saved my life."

"Ah! you won't be so kind to me when you know all, Mr. MacPhail," sobbed the girl. "It was myself gave you the horrid stuff, but God knows I didn't mean to do you no harm no more than your own mother."

"What made you do it, then?" asked Malcolm.

"The witch-woman told me to. She said that—that—if I gave it you—you would—you would——" She buried her face in the bed, and so stifled a fresh howl of pain and shame. "And it was all lies—lies!" she resumed, lifting her face again, which now flashed with rage, "for I know you'll hate me worse than ever now."

"My poor girl, I never hated you," said Malcolm.

"No, but you did as bad: you never looked at me. And now you'll hate me out and out. And the doctor says if you die he'll have it all searched into, and Miss Caley she look at me as if she suspect me of a hand in it; and they won't let alone till they've got me hanged for it; and it's all along of love of you; and I tell you the truth, Mr. MacPhail, and you can do anything with me you like—I don't care—only you won't let them hang me, will you? Oh, please don't!" She said all this with clasped hands and the tears streaming down her face.

Malcolm's impulse was of course to draw her to him and comfort her, but something warned him. "Well, you see I'm not going to die just yet," he said as merrily as he could; "and if I find myself going I shall take care the blame falls on the right person. What was the witch-woman like? Sit down on the chair there and tell me all about her."

She obeyed with a sigh, and gave him such a description as he could not mistake. He asked where she lived, but the girl had never met her anywhere but in the street, she said.

Questioning her very carefully as to

Caley's behavior to her, Malcolm was convinced that she had a hand in the affair. Indeed, she had happily more to do with it than even Mrs. Catanach knew, for she had traversed her treatment to the advantage of Malcolm. The midwife had meant the potion to work slowly, but the lady's-maid had added to the pretended philtre a certain ingredient in whose efficacy she had reason to trust; and the combination, while it wrought more rapidly, had yet apparently set up a counteraction favorable to the efforts of the struggling vitality which it stung to an agonized resistance.

But Malcolm's strength was now exhausted. He turned faint, and the girl had the sense to run to the kitchen and get him some soup. As he took it her demeanor and regards made him anxious, uncomfortable, embarrassed. It is to any true man a hateful thing to repel a woman: it is such a reflection upon her. "I've told you everything, Mr. MacPhail, and it's gospel truth I've told you," said the girl after a long pause. It was a relief when first she spoke, but the comfort vanished as she went on, and with slow perhaps unconscious movements approached him. "I would have died for you, and here that devil of a woman has been making me kill you! Oh, how I hate her! Now you will never love me a bit—not one tiny little bit forever and ever!"

There was a tone of despairful entreaty in her words that touched Malcolm deeply. "I am more indebted to you than I can speak or you imagine," he said. "You have saved me from my worst enemy. Do not tell any other what you have told me, or let any one know that we have talked together. The day will come when I shall be able to show you my gratitude."

Something in his tone struck her, even through the folds of her passion. She looked at him a little amazed, and for a moment the tide ebbed. Then came a rush that overmastered her. She flung her hands above her head, and cried, "That means you will do anything but love me!"

"I cannot love you as you mean," said Malcolm. "I promise to be your friend, but more is out of my power."

A fierce light came in the girl's eyes. But that instant a terrible cry, such as Malcolm had never heard, but which he knew must be Kelpie's, rang through the air, followed by the shouts of men, the tones of fierce execration and the clash

and clang of hoofs. "Good God!" he exclaimed, and forgetting everything else, sprang from the bed and ran to the window outside his door. The light of their lanterns dimly showed a confused crowd in the yard of the mews, and amid the hellish uproar of their coarse voices he could hear Kelpie plunging and kicking. Again she uttered the same ringing scream. He threw the window open and cried to her that he was coming, but the noise was far too great for his enfeebled voice. Hurriedly he added a garment or two to his half-dress, rushed to the stair, passing his new friend, who watched anxiously at the head of it, without seeing her, and shot from the house.

CHAPTER L.

THE DEMONESS AT BAY.

WHEN he reached the yard of the mews the uproar had nothing abated. But when he cried out to Kelpie, through it all came a whinny of appeal, instantly followed by a scream. When he got up to the lanterns he found a group of wrathful men with stable-forks surrounding the poor animal, from whom the blood was streaming before and behind. Fierce as she was, she dared not move, but stood trembling, with the sweat of terror pouring from her. Yet her eye showed that not even terror had cowed her. She was but biding her time. Her master's first impulse was to scatter the men right and left, but on second thoughts, of which he was even then capable, he saw that they might have been driven to apparent brutality in defence of their lives, and besides, he could not tell what Kelpie might do if suddenly released. So he caught her by the broken halter and told them to fall back. They did so, carefully—it seemed unwillingly. But the mare had eyes and ears only for her master. What she had never done before, she nosed him over face and shoulders, trembling all the time. Suddenly one of her tormentors darted forward and gave her a terrible prod in the off hind-quarter. But he paid dearly for it. Ere he could draw back she lashed out and shot him half across the yard with his knee-joint broken. The whole set of them rushed at her.

"Leave her alone," shouted Malcolm, "or I will take her part. Between us we'll do for a dozen of you."

"The devil's in her," said one of them.

"You'll find more of him in that rascal groaning yonder. You had better see to

him. He'll never do such a thing again, I fancy. Where is Merton?"

They drew off and went to help their comrade, who lay senseless.

When Malcolm would have led Kelpie in, she stopped suddenly at the stable-door, and started back shuddering as if the memory of what she had endured there overcame her. Every fibre of her trembled. He saw that she must have been pitifully used before she broke loose and got out. But she yielded to his coaxing, and he led her to her stall without difficulty. He wished Lady Clementina herself could have been his witness how she knew her friend and trusted him. Had she seen how the poor bleeding thing rejoiced over him, she could not have doubted that his treatment had been in part at least a success.

Kelpie had many enemies amongst the men of the mews. Merton had gone out for the evening, and they had taken the opportunity of getting into her stable and tormenting her. At length she broke her fastenings: they fled, and she rushed out after them.

They carried the maimed man to the hospital, where his leg was immediately amputated.

Malcolm washed and dried his poor animal, handling her as gently as possible, for she was in a sad plight. It was plain he must not have her here any longer: worse to her at least was sure to follow. He went up, trembling himself now, to Mrs. Merton. She told him she was just running to fetch him when he arrived: she had no idea how ill he was. But he felt all the better for the excitement, and after he had taken a cup of strong tea wrote to Mr. Soutar to provide men on whom he could depend—if possible the same who had taken her there before—to await Kelpie's arrival at Aberdeen. There he must also find suitable housing and attention for her at any expense until further directions, or until, more probably, he should claim her himself. He added many instructions to be given as to her treatment.

Until Merton returned he kept watch, then went back to the chamber of his torture, which, like Kelpie, he shuddered to enter. The cook let him in and gave him his candle, but hardly had he closed his door when a tap came to it, and there stood Rose, his preserver. He could not help feeling embarrassed when he saw her.

"I see you don't trust me," she said.

"I do trust you," he answered. "Will

"you bring me some water? I dare not drink anything that has been standing."

She looked at him with inquiring eyes, nodded her head and went. When she returned he drank the water.

"There! you see I trust you," he said with a laugh. "But there are people about who for certain reasons want to get rid of me: will you be on my side?"

"That I will," she answered eagerly.

"I have not got my plans laid yet; but will you meet me somewhere near this to-morrow night? I shall not be at home, perhaps, all day."

She stared at him with great eyes, but agreed at once, and they appointed time and place. He then bade her good-night, and the moment she left him lay down on the bed to think. But he did not trouble himself yet to unravel the plot against him, or determine whether the violence he had suffered had the same origin with the poisoning. Nor was the question merely how to continue to serve his sister without danger to his life; for he had just learned what rendered it absolutely imperative that she should be removed from her present position. Mrs. Merton had told him that Lady Lossie was about to accompany Lady Bellair and Lord Liftore to the Continent. That must not be, whatever means might be necessary to prevent it. Before he went to sleep things had cleared themselves up considerably.

He woke much better, and rose at his usual hour. Kelpie rejoiced him by affording little other sign of the cruelty she had suffered than the angry twitching of her skin when hand or brush approached a wound. The worst fear was that some few white hairs might by-and-by in consequence fleck her spotless black. Having urgently committed her to Merton's care, he mounted Honor and rode to the Aberdeen wharf. There, to his relief, time growing precious, he learned that the same smack in which Kelpie had come was to sail the next morning for Aberdeen. He arranged at once for her passage, and saw, before he left, to every contrivance he could think of for her safety and comfort. He warned the crew concerning her temper, but at the same time prejudiced them in her favor by the argument of a few sovereigns. He then rode to the Chelsea Reach, where the Psyche had now grown to be a feature of the river in the eyes of the dwellers upon its banks.

At his whistle Davy tumbled into the dinghy like a round ball over the gunwale, and was rowing for the shore ere his

whistle had ceased ringing in Malcolm's own ears. He left him with his horse, went on board and gave various directions to Travers; then took Davy with him, and bought many things at different shops, which he ordered to be delivered to Davy when he should call for them. Having next instructed him to get everything on board as soon as possible, and appointed to meet him at the same place and hour he had arranged with Rose, he went home.

A little anxious lest Florimel might have wanted him, for it was now past the hour at which he usually waited her orders, he learned to his relief that she was gone shopping with Lady Bellair, upon which he set out for the hospital whither they had carried the man Kelpie had so terribly mauled. He went, not merely led by sympathy, but urged by a suspicion also which he desired to verify or remove. On the plea of identification he was permitted to look at him for a moment, but not to speak to him. It was enough: he recognized him at once as the same whose second attack he had foiled in the Regent's Park. He remembered having seen him about the stable, but had never spoken to him. Giving the nurse a sovereign and Mr. Soutar's address, he requested her to let that gentleman know as soon as it was possible to conjecture the time of his leaving. Returning, he gave Merton a hint to keep his eye on the man, and some money to spend for him as he judged best. He then took Kelpie for an airing. To his surprise, she fatigued him so much that when he had put her up again he was glad to go and lie down.

When it came near the time for meeting Rose and Davy he got his things together in the old carpet-bag, which held all he cared for, and carried it with him. As he drew near the spot, he saw Davy already there, keeping a sharp lookout on all sides. Presently Rose appeared, but drew back when she saw Davy. Malcolm went to her. "Rose," he said, "I am going to ask you to do me a great favor. But you cannot except you are able to trust me."

"I do trust you," she answered.

"All I can tell you now is that you must go with that boy to-morrow. Before night you shall know more. Will you do it?"

"I will," answered Rose. "I dearly love a secret."

"I promise to let you understand it if you do just as I tell you."

"I will."

"Be at this very spot, then, to-morrow

morning at six o'clock. Come here, Davy. This boy will take you where I shall tell him."

She looked from the one to the other. "I'll risk it," she said.

"Put on a clean frock, and take a change of linen with you and your dressing-things. No harm shall come to you."

"I'm not afraid," she answered, but looked as if she would cry.

"Of course you will not tell any one."

"I will not, Mr. MacPhail."

"You are trusting me a great deal, Rose, but I am trusting you too—more than you think. Be off with that bag, Davy, and be here at six to-morrow morning to carry this young woman's for her." Davy vanished.

"Now, Rose," continued Malcolm, "you had better go and make your preparations."

"Is that all, sir?" she said.

"Yes. I shall see you to-morrow. Be brave."

Something in Malcolm's tone and manner seemed to work strangely on the girl. She gazed up at him half frightened, but submissive, and went at once, looking, however, sadly disappointed.

Malcolm had intended to go and tell Mr. Graham of his plans that same night, but he found himself too much exhausted to walk to Camden Town. And thinking over it, he saw that it might be as well if he took the bold measure he contemplated without revealing it to his friend, to whom the knowledge might be the cause of inconvenience. He therefore went home and to bed, that he might be strong for the next day.

From The Fortnightly Review.

ON CERTAIN RELATIONS BETWEEN PLANTS AND INSECTS.*

At the close of the last century, Sprengel published a remarkable memoir on the relations of flowers and insects, and showed in a variety of cases how beautifully the flowers were so constructed as to secure their fertilization by insects. Neither plants nor insects, indeed, would be what they are, but for the influence which each has exercised on the other. Some plants, indeed, are altogether dependent on insects for their very existence. We know now, for instance, that certain plants produce no seeds at all, unless

visited by insects. Thus, in some of our colonies, the common red clover sets no seeds on account of the absence of humble-bees; for the proboscis of the hive bee is not long enough to effect the object. According to Mr. Belt, the same is the case, for the same reason, in Nicaragua, with the scarlet-runner. But even in those instances in which it is not absolutely necessary, it is a great advantage that the flowers should be fertilized by pollen brought from a different plant, and, with this object in view, insects are tempted to visit flowers for the sake of the honey and pollen; while the colors and scents are useful in making the flowers more easy to find.

Fortunately for us, bees like the same odors as we do; and as the great majority of flowers are adapted for bees, they are consequently sweet; but it might have been otherwise, for flies prefer evil smells, such as those of decaying meat, and other animal substances on which they live as larvæ, and some flowers, consequently, which are fertilized by them, are characterized by very evil odors. Colors, also, are affected in the same manner, for while bee flowers (if I may coin such an expression) have generally bright, clear colors, fly flowers are usually reddish or yellowish brown.

The real use of honey now seems so obvious that it is remarkable to see the various theories which were once entertained on the subject. Patrick Blair thought that the honey absorbed the pollen, and then fertilized the ovary. Pontedera thought it kept the ovary in a moist condition. Linnæus confessed his inability to solve the question. Other botanists considered that it was useless material thrown off in the process of growth. Krünitz observed that in meadows much visited by bees the plants were more healthy, but the inference he drew was, that the honey, unless removed, was very injurious, and that the bees were of use in carrying it off.

Kurr observed that the formation of honey in flowers is intimately associated with the maturity of the stamens and pistil. He lays it down, as a general rule, that it very seldom commences before the opening of the anthers, is generally most copious during their maturity, and ceases so soon as the stamens begin to wither, and the development of the fruit commences. Rothe's observations also led him to a similar conclusion, and yet neither of these botanists perceived the intimate association which exists between the presence of honey and the period at which the visits

* The substance of this article was delivered as a lecture before the Society of Arts. Some additions have been made to it, in its present form.

of insects are of importance to the plant. Sprengel was the first to point out the real office of honey, but his views were far from meeting with general consent, and even so lately as 1833 were altogether rejected by Kurr, who came to the conclusion that the secretion of honey is the result of developmental energy, which afterwards concentrates itself on the ovary.

No doubt, however, seems any longer to exist that Sprengel's view is right; and that the true function of honey is to attract insects and thus to secure cross-fertilization. Thus most of the *Rosaceæ* are fertilized by insects and possess nectaries; but, as Delpino has pointed out, the genus *Poterium* is anemophilous, or wind-fertilized, and possesses no honey. So also the maples are almost all fertilized by insects and produce honey; but *Acer negundo* is anemophilous and honeyless. Again among the *Polygonaceæ* some species are insect-fertilized and melliferous, while on the other hand certain genera, *Rumex* and *Oxyria*, have no honey, and are fertilized by the wind. At first sight it might appear an objection to this view,—and one reason perhaps why the earlier botanists missed the true explanation may have been the fact,—that some plants secrete honey on other parts besides the flowers. Belt and Delpino have, I think, suggested the true function of these extra-floral nectaries. The former of these excellent observers describes a South American species of acacia, which, if unprotected, is apt to be stripped of the leaves by a leaf-cutting ant, which uses the leaves, not directly for food, but, according to Mr. Belt, to grow mushrooms on. The acacia, however, bears hollow thorns, and each leaflet produces honey in a crater-formed gland at the base, and a small, sweet, pear-shaped body at the tip. In consequence, it is inhabited by myriads of a small ant, *Pseudomyrma bicolor*, which nests in the hollow thorns, and thus finds meat, drink, and lodging all provided for it. These ants are continually roaming over the plant, and constitute a most efficient body-guard, not only driving off the leaf-cutting ants, but, in Belt's opinion, rendering the leaves less liable to be eaten by herbivorous mammalia. Delpino mentions that on one occasion he was gathering a flower of *Clerodendron fragrans*, when he was suddenly attacked by a whole army of small ants.

I am not aware that any of our English plants are protected in this manner from the browsing quadrupeds, but not the less

do our ants perform for them a very similar function, by keeping down the number of small insects, which would otherwise rob them of their sap and strip them of their leaves.

Forel watched, from this point of view, a nest of *Formica pratensis*. He found that the ants brought in dead insects, small caterpillars, grasshoppers, cercopis, etc., at the rate of about twenty-eight a minute, or more than one thousand six hundred in an hour. When it is considered that the ants work not only all day, but in warm weather often all night too, it is easy to see how important a function they fulfil in keeping down the numbers of small insects.

Some of the most mischievous insects, indeed—certain species, for instance, of aphid and coccus—have turned the tables on the plants, and converted the ants from enemies into friends, by themselves developing nectaries, and secreting honey, which the ants love. We have all seen the little brown garden ant, for instance, assiduously running up the stems of plants, to milk their curious little cattle. By this ingenious idea, not only do the aphides and cocci secure immunity from the attacks of the ants, but even turn them from foes into friends. They are subject to the attacks of a species of ichneumon, which lays its eggs in them, and Delpino has seen the ants watching over them with truly maternal vigilance, and driving off the ichneumons whenever they attempted to approach.

But though ants are in some respects very useful to plants, they are not wanted in the flowers. The great object is to secure cross-fertilization; but for this purpose winged insects are almost necessary, because they fly readily from one plant to another, and generally confine themselves for a certain time to the same species. Creeping insects, on the other hand, naturally would pass from each floret to the next; and, as Mr. Darwin has shown in his last work, it is of little use to bring pollen from a different flower of the same plant; it must be from a different plant altogether. Moreover, creeping insects when they quitted a plant would naturally creep up another close by, without any regard to species. Hence, even to small flowers (such as many cruciferae, compositae, saxifrages, etc.), which, as far as size is concerned, might well be fertilized by ants, the visits of flying insects are much more advantageous. Moreover, if larger flowers were visited by ants, not only would they deprive the flowers of their

honey without fulfilling any useful function in return, but they would probably prevent the really useful visits of bees. If you touch an ant with a needle or a bristle, she is almost sure to seize it in her jaws; and if bees when visiting any particular plant were liable to have the delicate tip of their proboscis seized on by the horny jaws of an ant, we may be sure that such a plant would soon cease to be visited.

On the other hand, we know how fond ants are of honey, and how zealously and unremittingly they search for food. How is it, then, that they do not anticipate the bees and secure the honey for themselves? Kerner has recently published a most interesting memoir on this subject, and pointed out a number of ingenious contrivances by which flowers protect themselves from the unwelcome visits of such intruders. The most frequent are the interposition of *chevaux de frise*, which ants cannot penetrate, glutinous parts which they cannot traverse, slippery slopes which they cannot climb, or barriers which close the way.

Firstly, then, as regards *chevaux de frise*. In some respects these are the most effectual protection, since they exclude not only creeping insects, but also other creatures, such as slugs. With this object, it will be observed that the hairs which cover the stalks of so many herbs usually point downwards. A good example of this is afforded, for instance, by a plant allied to our common blue scabious, *Knautia dipsacifolia*. The heads of the common carline (*Carlina vulgaris*), again, present a sort of thicket, which must offer an impenetrable barrier to ants. Some species of plants are quite smooth, excepting just below the flowers. The common but beautiful cornflower (*Centaurea cyanus*) is quite smooth, but the involucre forming the flower-head are bordered with recurved teeth. In this case neither the stem nor the leaves show a trace of such prickles. In this species the stigma projects about one-fifth of an inch above the flower, so that if ants could obtain access they would steal the honey without fertilizing the flower; a flying insect, on the contrary, alighting on the flower, could scarcely fail to touch the stigma.

Another common mode of protection is by glutinous surfaces.

Kerner has called attention to a very interesting illustration afforded by *Polygonum amphibium*. The beautiful rosy flowers of this species are rich in nectar; the stamens are short; the pistil, on the contrary, projects considerably above the

corolla. The nectar is not protected by any special arrangement of the flower itself, and is accessible even to very small insects. The stamens ripen before the pistil, and any flying insect, however small, coming from above, would assist in cross-fertilization. Creeping insects, on the contrary, which in most cases would enter from below, would rob the honey without benefiting the plant. *P. amphibium*, as its name denotes, grows sometimes in water, sometimes on land. So long, of course, as it grows in water, it is thoroughly protected, and the stem is smooth; while, on the other hand, those specimens which live on land throw out certain hairs which terminate in sticky glands, and thus prevent small insects from creeping up to the flowers. In this case, therefore, the plant is not sticky, except just when this condition is useful.

All these viscous plants, as far as I know, have upright or horizontal flowers. On the other hand, where the same object is effected by slippery surfaces, the flowers are often pendulous; creeping creatures being thus kept out of them, just as the pendulous nests of the weaver bird are a protection from snakes and other enemies. As instances of this kind, I may mention the common snowdrop, or the cyclamen.

I have elsewhere suggested that the so-called "sleep" of flowers had reference to the habits of insects, on the ground that flowers which are fertilized by night-flying insects would derive no advantage by being open in the day; while, on the other hand, those which are fertilized by bees would gain nothing by being open at night. I confess that I suggested this with much diffidence, but it may now, I think, be regarded as well established.

Silene nutans, the Nottingham catchfly, is a very instructive species from this point of view, and indeed illustrates a number of interesting points in the relations between plants and insects. Its life history has recently been well described by Kerner. The upper part of the flowering stem is viscid, from which it has derived its local name, the Nottingham catchfly. This prevents the access of ants and other small creeping insects. Each flower lasts three days, or rather three nights. The stamens are ten in number, arranged in two sets, the one set standing in front of the sepals, the other in front of the petals. Like other night flowers, it is white, and opens towards evening, when it also becomes extremely fragrant. The first evening, towards dusk, the stamens in front of the sepals

grow very rapidly for about two hours, so that they emerge from the flower; the pollen ripens, and is exposed by the bursting of the anther. So the flower remains through the night, very attractive to and much visited by moths. Towards three in the morning the scent ceases, the anthers begin to shrivel up or drop off, the filaments turn themselves outwards so as to be out of the way, while the petals, on the contrary, begin to roll themselves up, so that by daylight they close the aperture of the flower, and present only their brownish-green undersides to view, which, moreover, are thrown into numerous wrinkles. Thus, by the morning's light, the flower has all the appearance of being faded. It has no smell, and the honey is covered over by the petals. So it remains all day. Towards evening, however, everything is changed. The petals unfold themselves, by eight o'clock the flower is as fragrant as before, the second set of stamens have rapidly grown, their anthers are open, and the pollen again exposed. By morning the plant is again asleep, the anthers are shrivelled, the scent has ceased, and the petals rolled up as before. The third evening again the same process, but this time it is the pistil which grows, and the long spiral stigmas on the third evening take the position which on the previous two had been occupied by the anthers, and can hardly fail to be dusted by the moths with pollen brought from another flower.

An objection to the view that the sleep of flowers is regulated by the visits of insects, might be derived from the cases of those flowers which close early in the day, the well-known *Tragopogon pratense*, or "John go to bed at noon," for instance; still more, such species as *Lapsana communis*, or *Crepis pulchra*, which open before six and close again before ten in the morning. Bees, however, are very early risers, while ants come out much later, when the dew is off the grass; so that it might well be an advantage to a flower which was quite unprotected to open early for the bees, and close again before the ants were out, thus preserving its honey for another day.

So much for the first part of my subject. I must now pass to the second—the action of plants upon insects. It would here, perhaps, be most natural to discuss the modifications which have been produced in insects by the search after honey and pollen; especially the gradual lengthening of the proboscis in butterflies, moths, and bees, to enable

them to suck the honey, and the adaptation of the legs of bees to enable them to carry off the more or less dry and dusty pollen. Having, however, already treated of them elsewhere, it will be better for me to take other illustrations, and fortunately there is no lack or difficulty.

Many of the cases in which certain insects escape danger by their similarity to plants are well known; the leaf insect and the walking-stick insect are familiar and most remarkable cases. The larvæ of insects afford, also, many interesting examples, and, in other respects also, teach us, indeed, many instructive lessons. It would be a great mistake to regard them as merely preparatory stages in the development of the perfect insect. They are much more than this, for the external circumstances act on the larvæ, as well as on the perfect insect, and both, therefore, are liable to adaptation. In fact, the modifications which insect larvæ undergo may be divided into two kinds—developmental, or those which tend to approximation to the mature form; and adaptational or adaptive, those which tend to suit them to their own mode of life.

It is a remarkable fact that the forms of larvæ do not depend on that of the mature insect. In many cases, for instance, very similar larvæ produce extremely dissimilar insects. In other cases similar, or comparatively similar, perfect insects have very dissimilar larvæ. Indeed, a classification of insects founded on larvæ would be quite different from that founded on the perfect insects. The hymenoptera, for instance, which, so far as the perfect insects are concerned, form a very homogeneous group, would be divided into two—or rather one portion of them, namely, the saw-flies, would be united to the butterflies and moths. Now, why do the larvæ of saw-flies differ from those of other hymenoptera, and resemble those of butterflies and moths? It is because their habits differ from those of other hymenoptera, and they feed on leaves, like ordinary caterpillars.

From this point of view, the transformations of the genus *Sitaris*, which has been very carefully investigated by M. Fabre, are peculiarly interesting.

The genus *Sitaris* (a small beetle allied to *Cantharis*, the blister-fly, and to the oil-beetle) is parasitic to a kind of bee (*Anthophora*) which excavates subterranean galleries, each leading to a cell. The eggs of the sitaris, which are deposited at the entrance of the galleries, are hatched at the end of September or beginning of October,

and M. Fabre not unnaturally expected that the young larvæ, which are active little creatures with six serviceable legs, would at once eat their way into the cells of the anthophora. No such thing: till the month of April following they remain without leaving their birthplace, and consequently without food; nor do they in this long time change either in form or size. M. Fabre ascertained this, not only by examining the burrow of the anthophoras, but also by direct observations of some young larvæ kept in activity. In April, however, his captives at last awoke from their long lethargy, and hurried anxiously about their prisons. Naturally inferring that they were in search of food, M. Fabre supposed that this would consist either of the larvæ or pupæ of the anthophora, or of the honey with which it stores its cell. All three were tried without success. The first two were neglected, and the larvæ, when placed on the latter, either hurried away or perished in the attempt, being evidently unable to deal with the sticky substance. M. Fabre was in despair: "*J'ai jamais expérience*," he says, "*n'a éprouvé pareille déconfiture. Larves, nymphes, cellules, miel, je vous ai tous offert; que voulez-vous, donc, bestioles maudites?*" The first ray of light came to him from our countryman, Newport, who ascertained that a small parasite found by Léon Dufour on one of the wild bees was, in fact, the larva of the oil-beetle. The larvæ of sitaris much resembled Dufour's larvæ. Acting on this hint, M. Fabre examined many specimens of anthophora, and found on them at last the larvæ of his sitaris. The males of anthophora emerge from the pupæ sooner than the females, and M. Fabre ascertained that, as they come out of their galleries, the little sitaris larvæ fasten upon them. Not, however, for long: instinct teaches them that they are not yet in the straight paths of development; and, watching their opportunity, they pass from the male to the female bee. Guided by these indications, M. Fabre examined several cells of the anthophora; in some, the egg of the anthophora floated by itself on the surface of the honey, in others, on the egg, as on a raft, sat the still more minute larva of the sitaris. The mystery was solved. At the moment when the egg is laid the sitaris larva springs upon it. Even while the poor mother is carefully fastening up her cell, her mortal enemy is beginning to devour her offspring; for the egg of the anthophora serves not only as a raft, but as a repast. The honey, which is enough for either,

would be too little for both; and the sitaris, therefore, at its first meal, relieves itself from its only rival. After eight days the egg is consumed, and on the empty shell the sitaris undergoes its first transformation, and makes its appearance in a very different form.

The honey, which was fatal before, is now necessary, the activity, which before was necessary, is now useless; consequently, with the change of skin, the active, slim larva changes into a white, fleshy grub, so organized as to float upon the surface of the honey, with the mouth beneath and the spiracles above the surface: "*Grâce à l'embonpoint du ventre*," says M. Fabre, "*la larve est à l'abri de l'asphyxie*." In this state it remains until the honey is consumed; then the animal contracts, and detaches itself from its skin, within which the further transformations take place. In the next stage, which M. Fabre calls the pseudo-chrysalis, the larva has a solid corneous envelope and an oval shape, and in its color, consistency, and immobility reminds one of a dipterous pupa. The time passed in this condition varies much. When it has elapsed the animal moults again, again changes its form; after this it becomes a pupa, without any remarkable peculiarities. Finally, after these wonderful changes and adventures, in the month of August, the perfect sitaris makes its appearance.

In fact, whenever in any group we find differences in form or color, we shall always find them associated with differences in habit. Let us take the case of caterpillars. The prevailing color of caterpillars is green, like that of leaves. The value of this to the young insect, the protection it affords, is obvious. We must all have observed how difficult it is to distinguish small green caterpillars from the leaves on which they feed. When, however, they become somewhat larger, their form betrays them, and it is important that there should be certain marks to direct the eye from the outlines of the body. This is effected, and much protection given, by longitudinal lines, which accordingly are found on a great many caterpillars. These lines, both in color and thickness, much resemble some of the lines on leaves (especially those, for instance, of grasses), and also the streaks of shadow which occur among foliage. If, however, this is the explanation of them, then they ought to be wanting, as a general rule, in very small caterpillars, and to prevail most among those which feed on or among grasses. Now, similar lines occur on a

great number of caterpillars belonging to most different groups of butterflies and moths, as you may see by turning over the illustrations of any monograph of the lepidoptera. They exist among the hawk-moths, as, for instance, in the humming-bird hawk-moth; they occur in many butterflies, as, for instance, in *Argo galathea*, which feeds on the cat's-tail grass; and in many moths, as, for instance, in *Pyrophila tragopoginis*, which feeds on the leaves of the "John go to bed at noon" (*Tragopogon*). Now you will find that the smallest caterpillars rarely possess these white streaks. As regards the second point also, the streaks are generally wanting in caterpillars which feed on large-leaved plants. The *Satyrinae*, on the contrary, all possess them, and all live on grass. In fact we may say, as a general rule, that these longitudinal streaks only occur on caterpillars which live on or among narrow-leaved plants. As the insect grows, these lines often disappear on certain segments, and are replaced by diagonal lines. These diagonal lines occur in a great many other caterpillars belonging to the most distinct families of butterflies and moths. They come off just at the same angle as the ribs of leaves, and resemble them very much in general effect. They occur also especially in species which feed on large-leaved plants, and I believe I may say that though a great many species of caterpillars present these lines, they are rarely, if ever, present in species which live on grass, while, on the contrary, they are very frequent in those species which live on large-leaved plants. It might at first be objected to this view, that there are many cases, as in the elephant hawk-moth, in which caterpillars have both. A little consideration, however, will explain this. In small caterpillars these oblique lines would be useless, because they must have some relation, not only in color, but in their distances apart, to the ribs of the leaves. Hence, while there are a great many species which have longitudinal lines when young, and diagonal ones when they are older and larger, there is not, I believe, a single one which begins with diagonal lines and then replaces them with longitudinal ones. The disappearance of the longitudinal lines on those segments which have diagonal ones, is striking where the lines are marked. It is an advantage, because white lines crossing one another at such an angle have no relation to anything which occurs in plants, and would make the creature more conspicuous. It is an advantage, therefore,

that when the diagonal lines are developed, the longitudinal ones should disappear. There is one other point in connection with these diagonal lines to which I must call your attention. In many species they are white, but in some cases, as for instance in the beautiful green caterpillar of the privet hawk-moth, the white streak is accompanied by a colored one—in that case lilac. At first we might think that this would be a disadvantage, as tending to make the caterpillar more conspicuous; and in fact if we put one in full view out, for instance, on a table and focus the eye on it, the colored lines are very striking. But we must remember that the habit of the insect is to sit on the inside of the leaf, generally near the midrib, and in the subdued light of such a situation, especially if the eye is not looking exactly at them, the colored lines beautifully simulate a line of soft shadow, such as must always accompany a strong rib; and I need not tell any artist that the shadows of yellowish green must be purplish. Moreover, any one who has ever found one of these large caterpillars will, I am sure, agree with me that it is surprising, when we consider their size and conspicuous coloring, how difficult they are to see.

But though the prevailing color of caterpillars is green, there are numerous exceptions. Some caterpillars are white. These either feed on wood, in which they burrow, such as the species of *Sphacia* and *Trochilium seuzera*, or on roots, as the ghost-moth (*Hepialus humuli*); *Hipparchia hyperanthus* (the ringlet butterfly) has also whitish caterpillars, and this may at first sight appear to contradict the rule, since it feeds on grass. Its habit is, however, to keep at the roots by day, and feed only at night.

In various genera we find black caterpillars, which are of course very conspicuous, and, so far as I know, are not distasteful to birds. In every case, however, it will be found that they are covered with hairs or spines, which protect them from most birds. In such species the bold dark color may be an advantage, by rendering the hair more conspicuous. As instances of caterpillars which are black and hairy, I may quote, among our English butterflies, *Melitæa cinxia*, *M. Artemis*, *M. athalia*, *M. selene*, *M. dia*, *M. Euphrosyne*, *Argynnis aglaja*, *Vanessa polychloros*, *V. Io*, and *V. Antiope*; while among moths there are *Arctia villica*, *A. caga*, and *Heraclea dominula*. I do not know, however, of any large caterpillar which is black and smooth.

Brown caterpillars, also, are frequently protected by hairs or spines in the same way. As instances may be mentioned *Cynthia cardui*, *Argynnis lathonia*, *Eriogaster lanestris*, *Odonestis potatoria*, *Lasiocampa rubi*, *L. trifolii*, and *L. roboris*. Brown caterpillars, however, unlike black ones, are frequently naked. These fall into two principal categories: firstly, those which, like the *Geometridæ*, put themselves into peculiar and stiff attitudes, so that in form, color, and position they closely resemble bits of dry stick; and, secondly, those which feed on low plants, concealing themselves on the ground by day, and only coming out in the dark.

Yellow and yellowish-green caterpillars are abundant, and their color is a protection. Red and blue, on the contrary, are much less common colors, and are generally present as spots.

Caterpillars with red lines or spots are generally hairy, and for the reason given above. Such, for instance, are *Vanessa Antiopa*, *Limenitis Camilla*, *Oenistis quadra*, *Deiopæa pulchella*, *Acronycta tridens*, *A. psi*, *A. rumicis*, *A. euphorbia*, *A. auricoma*, *Dipthera Orion*. On the other hand, *Papilio machaon* has red spots and still is smooth; but as it emits a strongly-scented liquid when alarmed, it is probably distasteful to birds. I cannot recall any other case of a caterpillar which has conspicuous red spots or lines, and yet is smooth.

Blue is among caterpillars even a rarer color than red. Indeed, among our larger species the only cases I can recall are the species of *Gastropacha*, which have two conspicuous blue bands, the death's-head moth, which has broad diagonal bands, and *Charocampa*, which has two bright-blue oval patches on the third segment. The species of *Gastropacha* are protected by being hairy, but why they have the blue bands I have no idea. It is interesting that the other species both frequent plants which have blue flowers. The peculiar hues of the death's-head hawk-moth caterpillar, which feeds on the potato, unite so beautifully the brown of the earth, the yellow and green of the leaves, and the blue of the flowers, that, in spite of its size, it can scarcely be perceived unless the eye be focussed exactly upon it.

Charocampa nerii is also a beautiful case. Many of the hawk-moth caterpillars have eye-like spots, to which I shall have to allude again presently. These are generally reddish or yellowish, but in *Ch. nerii*, which feeds on the periwinkle, they

are bright blue, and in form as well as color closely resemble the blue petals of that flower. *Ch. celerio* also has two smaller blue spots, with reference to which I can make no suggestion. It is a very rare species, and I have never seen it. Possibly, in this case, the blue spots may be an inherited character.

No one who looks at any representations of hawk-moth caterpillars can fail to be struck by the peculiar coloring of those belonging to the genus *Anceryx*, which differ in style of coloring from all other sphinx larvæ, having longitudinal bands of brown and green. Why is this? Their *habitat* is different. They feed on the leaves of the pinaster, and their peculiar coloring offers a general similarity to the brown twigs and narrow green leaves of a conifer. There are not many species of lepidoptera which feed on the pine, but there are a few; such for instance are *Achatia spreta* and *Dendrolimus pini*, both of which have a very analogous style of coloring to that of *Anceryx*, while the latter has also tufts of bluish green hair which singularly mimic the leaves of the pine. It is still more remarkable that in a different order of insects, that of the hymenoptera, we again find species, for instance, *Lophyrus socia*, which live on the pine, and in which the same style of coloring is repeated.

Let us now take a single group and see how far we can explain its various colors and markings, and what are the lessons which they teach us. For this purpose I think I cannot do better than select the larvæ of the *Sphingidæ*, which have just been the subject of a masterly monograph by Dr. Weissmann, the learned professor of Freiburg.

The caterpillars of this group are very different in color—green, white, yellow, brown, sometimes even gaudy, varied with spots, patches, streaks, and lines. Now, are these differences merely casual and accidental, or have they a meaning and a purpose? In many, perhaps in most cases, the markings serve for the purpose of concealment. When, indeed, we see caterpillars represented on a white sheet of paper, or if we put them on a plain table, and focus the eye on them, the colors and markings would seem, if possible, to render them even more conspicuous, as, for instance, in *D. galii*; but amongst the intricate lines and varied colors of foliage and flowers, and if the insect be a little out of focus, the effect is very different.

Let us begin with the *Charocampa el-*

penor, the elephant hawk-moth. The caterpillars, as represented in most entomological works, are of two varieties, most of them brown, but some green. Both have a white line on the three first segments; two remarkable eye-like spots* on the fourth and fifth, a very faint median line, and another more than four inches long. I will direct your attention specially, for the moment, to three points, — what mean the eye-spots and the faint lateral line; and why are some green and some brown, offering thus such a marked contrast to the leaves of the *Epilobium parvum*, on which they feed? Other questions will suggest themselves later, for I must now call your attention to the fact that, when they first quit the egg, and come into the world, they are quite different in appearance, being like so many other small caterpillars, bright green, and almost exactly the color of the leaves on which they feed. That this color is not a necessary or direct consequence of the food, we see from the case of quadrupeds, which, as I need not say, are never green. It is, however, so obviously a protection to them, that the explanation of the green color of small caterpillars suggests itself to every one. After five or six days, and when they are about a quarter of an inch in length, they go through their first moult. In their second stage, they have a white subdorsal line stretching along the body, from the horn to the head; and after a few days, but not at first, traces of the eye-spots appear on the fourth and fifth segments. There is also a second pale line running along the side. After another five or six days, and when about half an inch in length, our caterpillars moult again. In their third stage, the commencement of the eye-spots is more marked, while, on the contrary, the lower longitudinal line has disappeared. After another moult, the eye-spots are still more distinct, the white gradually becomes surrounded by a black line, while the centre becomes somewhat violet. The subdorsal line has almost, or entirely disappeared, and in some specimens faint diagonal lines make their appearance. Some few assume a brownish tint, but not many. A fourth moult takes place in seven or eight days, and when the caterpillars are about an inch and a half in length. Now, the difference

shows itself still more between the two varieties, some remaining green, while the majority become brown. The eye-spots are more marked and the pupil more distinct, the diagonal lines plainer, while the subdorsal line is only indicated on the first three and eleventh segments. The last stage has been already described.

Now the principal points to which I desire to draw attention are (1) the green color, (2) the longitudinal lines, (3) the diagonal lines, (4) the brown color, and (5) the eye-spots.

As regards the first three, I think, however, I need say no more. The value of the green color to the young insect is obvious; nor is it much less clear that when it is somewhat larger, the longitudinal lines are a great advantage, while subsequently diagonal ones become even more important.

The next point is the color of the mature caterpillars. We have seen that some are green and others brown. The green ones are obviously merely those which have retained their original color. Now for the brown color. It is evident that this makes the caterpillar even more conspicuous among the green leaves than would otherwise be the case. Let us see, then, whether the habits of the insects will throw any light upon the riddle. What would you do if you were a big caterpillar? Why, like most other defenceless creatures, you would feed by night and lie concealed by day. So do these caterpillars. When the morning light comes they creep down the stem of the food-plant, and lie concealed among the thick herbage and dry sticks and leaves near the ground, and it is obvious that under such circumstances the brown color really becomes a protection. It might indeed be said that the caterpillars having become brown, concealed themselves on the ground; that in fact we were reversing the state of things. But this is not so, because while we may say, as a general rule, that (with some exceptions due to obvious causes) large caterpillars feed by night and lie concealed by day, it is by no means always the case that they are brown, some of them still retaining the green color. We may then conclude that the habit of concealing themselves by day came first, and that the brown color is a later adaptation. It is, moreover, interesting to note, that while the caterpillars which live on low plants often go down to the ground and turn brown, those which feed on large trees or plants remain on

* The shaded portions which replace the eye-spots on the other segments, are an instance of the general rule that a character which appears on every two segments has a tendency to develop itself on every other segment.

the under side of the leaves, and retain their green color.

Thus, in *Smerinthus ocellatus*, which feeds on the willow and sallow; *S. populi*, which feeds on the poplar; and *S. tilie*, which frequents the lime, the caterpillars all remain green; while in the convolvulus hawk-moth, which frequents the convolvulus; *Charocampa nerii*, which feeds in this country on the periwinkle; *Charocampa celerio*, *Ch. elpenor*, and *Ch. porcellus* (small low species which feed on galium), most of the caterpillars turn brown. There are, indeed, some caterpillars which are brown, and yet do not go down to the ground, as, for instance, those of *Aspilatis aspersaria*, and indeed of the *Geometridæ* generally. These caterpillars, however, as already mentioned, place themselves in peculiar attitudes, which, combined with their brown color, make them look almost exactly like bits of stick or dead twigs.

The last of the five points to which I called your attention was the eye-spots. In some cases spots may serve for concealment, by resembling the marks on dead leaves. In *Deilephila hippophae*, which feeds on the hippophae, or sea buckthorn, a very grey-green plant, the caterpillar also is a very similar grey-green, and has, when full grown, a single red spot on each side, which, as Weissmann suggests, at first sight much resembles in color and size one of the berries of hippophae, which, moreover, are present, though not ripe, at the same period of the year. Again, in *Charocampa tersa* there is an eye-spot on each segment, which mimics the flower of the plant on which it feeds (*Spermacoce hyssopifolia*). White spots, in some cases, also resemble the spots of light which penetrate foliage. In other instances, however, and at any rate in our elephant hawk-moth, the eye-spots certainly render the insect more conspicuous. Now in some cases, as Wallace has pointed out, this is an advantage rather than a drawback. Suppose that from the nature of its food or any other cause, as, for instance, from being covered with hair, a small green caterpillar was very bitter, or in any way disagreeable or dangerous as food, still in the number of small green caterpillars which birds love it would be continually swallowed by mistake. If, on the other hand, it had a conspicuous and peculiar color, its evil taste would serve to protect it, because the birds would soon recognize and avoid it, as Weir and others have proved experimentally. I have already alluded to a case of this among the hawk-

moths in *Deilephila euphorbia*, which, feeding on euphorbia, with its bitter milky juice, is very distasteful to birds, and is thus actually protected by its bold and striking colors. The spots on our elephant hawk-moth caterpillar do not admit of this explanation, because the insect is quite good to eat—I mean for birds. We must, therefore, if possible, account for them in some other way. There can, however, I think, be little doubt that Weissmann is right when he suggests that they actually protect the caterpillar by frightening its foes.

Every one must have observed that these large caterpillars have a sort of uncanny, poisonous appearance; that they suggest a small thick snake or other evil beast, and the eyes do much to increase the deception. Moreover, the segment on which they are placed is swollen, and the insect when in danger has the habit of retracting its head and front segments, which gives it an additional resemblance to some small reptile. That small birds are, as a matter of fact, afraid of these caterpillars (which, however, I need not say, are in reality altogether harmless) Weissmann has proved by actual experiment. He put a caterpillar in a tray in which he was accustomed to place seed for birds. Soon a little flock of sparrows and other small birds assembled to feed as usual. One of them lit on the edge of this tray, and was just going to hop in, when she spied the caterpillar. Immediately she began bobbing her head up and down, but was afraid to go nearer. Another joined her, and then another, until at last there was a little company of ten or twelve birds, all looking on in astonishment, but not one ventured into the tray, while one which lit in it unsuspectingly beat a hasty retreat in evident alarm as soon as she perceived the caterpillar. After watching for some time Weissmann removed the caterpillar, when the birds soon attacked the seeds.

Other caterpillars also are probably protected by their curious resemblance to spotted snakes. Moreover, as Weissmann points out, we may learn another very interesting lesson from these caterpillars. They leave the egg, as we have seen, a plain green, like so many other caterpillars, and gradually acquire a succession of markings, the utility of which I have just attempted to explain. The young larva, in fact, represents an old form, and the species in the lapse of ages has gone through the stage which each individual now passes through in a few weeks. Thus

the caterpillar of *Charocampa porcellus*, the small elephant hawk-moth, a species very nearly allied to *Ch. elpenor*, passes through almost exactly the same stages as that of *Ch. elpenor*. But it leaves the egg with a subdorsal line, which the caterpillar of *Ch. elpenor* does not acquire until after its moult. No one can doubt, however, that there was a time when the new-born caterpillars of *Ch. porcellus* were plain green, like those of *Ch. elpenor*. In this respect, then, *Ch. porcellus* is a newer specific form than *Ch. elpenor*. Again, if we compare the mature caterpillars of *Charocampa* we shall find that there are some forms, such as *Ch. myron* and *Ch. charilus* which never develop eye-spots, but even when full grown correspond to the second stage of *Ch. elpenor*. Here, then, we seem to have a species still in the stage which *Ch. elpenor* must have passed through long ago.

The genus *Deilephila*, of which we have in England three species — the euphorbia hawk-moth, the galium hawk-moth, and the rayed hawk-moth — is also very instructive. The caterpillar of the euphorbia hawk-moth begins life of a clear green color, without a trace of the subsequent markings. After the first moult, however, it has a number of black patches, a white line, and a series of white dots, and has therefore, at one bound, acquired characters which in *Ch. elpenor*, as we have seen, were only very gradually assumed. In the third stage the line has disappeared, leaving the white spots. In the fourth the caterpillars have become very variable, but are generally much darker than before, and have a number of white dots under the spots. In the fifth stage there is a second row of white spots under the first. The caterpillars not being good to eat, there is, as has been already pointed out, no need for, nor attempt at, concealment. Now if we compare the mature caterpillars of other species of the genus, we shall find that they represent phases in the development of *D. euphorbia*. *D. hippophae*, for instance, even when full grown, is a plain green, with only a trace of the line, and corresponds, therefore, with a very early stage of *D. euphorbia*; *D. zygophylli* of south Russia, has the line, and represents the second stage of *D. euphorbia*; *Deilephila livornica* has the line and the row of spots, and represents, therefore, the third stage; lastly, *D. vespertilio* and *D. galii* have progressed further, and lost the longitudinal line, but they never acquire the second row of spots which characterize the last stage of *D. euphorbia*.

Professor Weissmann's memoir, from which these facts are taken, is most suggestive, and opens up many points of interest.

For such inquiries as this, the larvæ of lepidoptera are particularly suitable, because they live an exposed life; the different species even of the same genus often feed on different plants, and are therefore exposed to different conditions, and last, not least, because we know more about the larvæ of the lepidoptera than of any other insects. The larvæ of ants all live in the dark; they are fed by the perfect ants, and being, therefore, all subject to very similar conditions, are all very much alike. It would puzzle even a good naturalist to determine the species of an ant larva, while, as we all know, the caterpillars of butterflies and moths are as easy to distinguish as the butterflies and moths; they differ from one another as much as, sometimes more than, the perfect insect.

There are five principal types of coloring among caterpillars. Those which live inside wood, or leaves, or underground, are generally of a uniform pale line; the small leaf-eating caterpillars are green, like the leaves on which they feed. The other three types may, *si parva licet componere magnis*, be compared with the three types of coloring among cats. There are the ground cats, such as the lion or puma, which are brownish or sand color, like the open places they frequent. So also caterpillars which conceal themselves by day at the roots of their food-plant tend, as we have seen, even if originally green, to assume the color of earth. The spotted or eyed cats, such as the leopard, live among trees; and their peculiar coloring renders them less conspicuous by mimicking spots of light which penetrate through foliage. So also many caterpillars are marked with spots, eyes, or patches of color. Lastly, there are the jungle cats, of which the tiger is a typical species, and which have stripes, rendering them very difficult to see among the brown grass which they frequent. It may, perhaps, be said that this comparison fails, because the stripes of tigers are perpendicular, while those of caterpillars are either longitudinal or oblique. This, however, so far from constituting a real difference, confirms the explanation, because in each case the direction of the lines follows those of the foliage. The tiger, walking horizontally on the ground, has transverse bars; the caterpillar, clinging to the grass in a vertical position, has longitudinal lines, while those which live on large veined

leaves have oblique lines like the oblique ribs of the leaves.

Thus, then, I think, we see reasons for many at any rate of the variations of color and markings in caterpillars, which at first sight seem so fantastic and inexplicable. I should, however, produce an impression very different from that which I wish to convey, were I to lead you to suppose that all these varieties have been explained or are understood. Far from it, they still offer a large field for study; nevertheless, I venture to think the evidence now brought forward, however imperfectly, is at least sufficient to justify the conclusion that there is not a hair or a line, not a spot or a color, for which there is not a reason, which has not a purpose or a meaning in the economy of nature.

JOHN LUBBOCK.

From The Examiner.
GREEN PASTURES AND PICCADILLY.

BY WILLIAM BLACK.
AUTHOR OF "THE ADVENTURES OF A PHANTOM," "THE PRINCESS OF THULE," ETC.

CHAPTER XIV.

FIRST EXPERIENCES.

MARRIAGE is in legal phrase the "high-est consideration;" even the cold and unromantic eye of the law perceives that the fact of a woman giving herself up, body and soul, to a man, is more than an equivalent for any sort of marriage settlement. But at no period of the world's history was it ever contemplated that a woman's immediate duty, on becoming a wife, was forthwith to efface her own individuality. Now this was what Lady Sylvia deliberately set about doing, in the first flush of her wifely devotion. As she had married the very source and fountain-head of all earthly wisdom, what use was there in her retaining opinions of her own? Henceforth she was to have always at her side the lawgiver, the arbiter, the infallible authority; she would surrender to his keeping all her beliefs just as she implicitly surrendered her trunks. She never thought twice about her new dresses: what railway-guard could withstand that terrible, commanding eye?

Now, little has been said to the point in these pages about Balfour, if it has not been shown that he was a man of violent prejudices. Perhaps he was not unlike other people in that respect; except in so

far as he took little pains to conceal his opinions. But if there was anything likely to cure him of prejudices it was to see them mimicked in the faithful and loving mirror now always by his side; for how could he help laughing at the unintentional distortions? He had been a bitter opponent of the Second Empire, while that bubble still glittered in the political atmosphere; but surely that was no reason why Lady Sylvia should positively refuse to remain in Paris?

"Gracious goodness," said he, "have you acquired a personal dislike for thirty millions of people? You may take my word for it, Sylvia, that as all you are likely to know about the French is by travelling among them, they are the nicest people in the world, so far as that goes. Look at the courtesy of the officials—look at the trouble a working-man or a peasant, will take to put you in the right road. Believe me, you may go further and fare worse. Wait, for example, till you make your first plunge into Germany. Wait till you see the Germans on board a Rhine steamer—their manners to strangers, their habits of eating——"

"And then?" she said, "am I to form my opinion of the Germans from that? Do foreigners form their opinion of England by looking at a steamer-load of people going to Margate?"

"Sylvia," said he, "I command you to love the French."

"I won't," she said.

But this defiant disobedience was only the curious result of a surrender of her own opinions. She was prepared to dislike thirty millions of human beings merely because he had expressed detestation of Louis Napoleon. And when he ended the argument with a laugh, the laugh was not altogether against her. From that moment he determined to seize every opportunity of pointing out to her the virtues of the French.

Of course it was very delightful to him to have for his companion one who came quite fresh to all those wonders of travel which lie close around our own door. One does not often meet nowadays with a young lady who has not seen, for example, the Rhine under moonlight. Lady Sylvia had never been out of England. It seemed to her that she had crossed interminable distances, and left her native country in a different planet altogether, when she reached Brussels, and she could not understand her husband when he said that in the Rue Montague de la Cour he had always the impression that he had just

stepped round the corner from Regent Street. And she tried to imagine what she would do in these remote places of the earth if she were all by herself — without this self-reliant guide and champion, who seemed to care no more for the awful and mysterious officials about railway-stations and the entrances to palaces than he would for the humble and familiar English policeman. The great deeds of chivalry were poor in her eyes compared with the splendid battle waged by her husband against extortion; the field of Waterloo was nearly witnessing another fearful scene of bloodshed, all because of a couple of francs. Then the Rhine, on the still moonlight night, from the high balcony in Cologne, with the colored lights of the steamers moving to and fro — surely it was he alone who was the creator of this wonderful scene. That he was the creator of some of her delight in it was probable enough.

Finally, they settled down in the little village of Rolandseck; and now, in this quiet retreat, after the hurry and bustle of travelling was over and gone, they were thrown more directly on each other's society, and left to find out whether they could find in the companionship of each other a sufficient means of passing the time. That, indeed, is the peril of the honeymoon period, and it has been the origin of a fair amount of mischief. You take a busy man away from all his ordinary occupations, and you take a young girl away from all her domestic and other pursuits, while as yet neither knows very much about the other, and while they have no common objects of interest — no business affairs, nor house affairs, nor children to talk about — and you expect them to amuse each other day after day, and day after day. Conversation, in such circumstances, is apt to dwindle down into very small rills indeed, unless when it is feared that silence may be construed into regret, and then a forced effort is made to pump up the waters. Moreover, Rolandseck, though one of the most beautiful places in the world, is a place in which one finds it desperately hard to pass the time. There is the charming view, no doubt, and the Balfours had corner rooms, whence they could see, under the changing lights of morning, of midday, of sunset, and moonlight, the broad and rushing river, the picturesque island, the wooded and craggy heights, and the mystic range of the Drachenfels. But the days were still, sleepy, monotonous. Balfour seated in the garden just over the river, would

get the *Kölnische* or the *Allgemeine*, and glance at the brief telegram headed *Grossbritannien*, which told all that was considered to be worth telling about his native country. Or, together, they would clamber up through the warm vineyards to the rocky heights by Roland's Tower, and there let the dreamy hours go by in watching the shadows cross the blue mountains, in following the small steamers and the greater rafts as they passed down the stream, in listening to the tinkling of the cattle-bells in the valley below. How many times a day did Balfour cross over by the swinging ferry to the small bathing-house on the other side, and there plunge into the clear, cold, rushing green waters? Somehow the days passed.

And, on the whole, they passed pleasantly. In England there was absolutely nothing going on that could claim any one's attention; the first absolute hush of the recess was unbroken even by those wandering voices that, later on, murmur of politics in unfrequented places. All the world had gone idling; if a certain young lady had wished to assume at once the rôle she had sketched out for herself — of becoming the solace and comfort of the tired legislator — there was no chance for her in England at least. Perhaps, on the whole, she was better occupied here in learning something about the nature of the man with whom she proposed to spend a lifetime. And here, too, in these quiet solitudes, Balfour occasionally abandoned his usual bantering manner, and gave her glimpses of a deep under-current of feeling, of the existence of which not even his most intimate friends were aware. When, as they walked alone in the still evenings, with the cool wind stirring the avenues of walnut-trees, and the moonlight beginning to touch the mists lying about Nonnenwerth and over the river, he talked to her as he had never talked to any human being before. And curiously enough, when his love for this newly-found companion sought some expression that would satisfy himself, he found it in snatches of old songs that his nurse, a Lowland Scotch-woman, had sung to him in his childhood. He had never read these lyrics. He knew nothing of their literary value. It was only as echoes that they came into his memory now; and yet they satisfied him in giving something of form to his own fancies. He did not repeat them to her; but as he walked with her, these old phrases, and chance refrains, seemed to suggest themselves quite naturally. Surely it was of her that this was written? —

O saw ye my wee thing, and saw ye my ain
thing,
And saw ye my true love down on yon lea?
Crossed she the meadow yestreen at the
gloaming,
Sought she the burnie where flowers the
haw-tree?
Her hair it is lint-white, her skin it is milk-
white,
Dark is the blue o' her saft rollin' ee,
Red, red her ripe lips and sweeter than roses,
Where could my wee thing wander frae me?
or this, again, —

Her bower casement is latticed wi' flowers,
Tied up wi' siller thread,
And courtly sits she in the midst,
Men's langing eyes to feed;
She waves the ringlets frae her cheek
Wi' her milky, milky han';
And her cheeks seem touched wi' the finger o'
God,
My bonnie Lady Ann!

He forgot that he was in the Rhineland
— the very cradle of lyrical romance. He
did not associate this fair companion with
any book whatever; the feelings that she
stirred were deeper down than that, and
they found expression in phrases that had
years and years ago become a part of his
nature. He forgot all about Uhland,
Heine, and the rest of the sweet and pa-
thetic singers who have thrown a glamor
over the Rhine-valley; it was the songs of
his boyhood that occurred to him.

Like dew on the gowan lying
Is the fa' o' her fairy feet,
And like winds in the summer sighing,
Her voice is low and sweet.

The lines are simple enough. Perhaps
they are even commonplace. But they
sufficed.

It must be said, however, that Balfour
was the reverse of an effusive person; and
this young wife very speedily discovered
that his bursts of tender confidences were
likely to be few and far between. He was
exceedingly chary of using endearing
phrases; more especially if there was a
third person present. Now she had been
used to elaborate and studied expressions
of affection. There was a good deal of
histrionics about Lord Willowby. He got
into violent rages with his servants about
the merest trifles; but these rages were as
predetermined as those of the first Napo-
leon are said to have been; he found that
it answered his purpose to have his tem-
per feared. On the other hand, his affec-
tion for his daughter was expressed on all
occasions with profuse phraseology — a
phraseology that was a trifle mawkish and
artificial when heard by others, but which

was not so to the object of it. She had
grown accustomed to it. To her it was
but natural language. Doubtless she had
been taught to believe that all affection
expressed itself in that way.

Here, again, she tried to school herself.
Convinced — by these rare moments of
self-disclosure — that the love he bore her
was the deepest and strongest feeling of
his nature, she would be content to do
without continual protestation of it. She
would have no lip-service. Did not reti-
cence in such matters arise from the feel-
ing that there were emotions and relations
too sacred to be continually flaunted before
the public gaze? Was she to distrust
the man who had married her because
he did not prate of his affection for her
within the hearing of servants?

The reasoning was admirable; the sen-
timent that prompted it altogether praise-
worthy. But before a young wife begins
to efface her personality in this fashion,
she ought to make sure that she has no
personality to speak of. Lady Sylvia had
a good deal. In these Surrey solitudes,
thrown greatly in on herself for compan-
ionship, she had acquired a certain ser-
iousness of character. She had very defi-
nite conceptions of the various duties of
life; she had decided opinions on many
points; she had, like other folks, a firmly-
fixed prejudice or two. For her to im-
agine that she could wipe out her own in-
dividuality, as if it were a sum on a slate,
and inscribe in its stead a whole series of
new opinions, was mere folly. It was
prompted by the most generous of mo-
tives; but it was folly none the less. Ob-
viously, too, it was a necessary corollary
of this effort at self-surrender, or rather
self-effacement, that her husband should
not be made aware of it; she would be to
him, not what she was, but what she
thought she ought to be.

Hyper-subtleties of fancy and feeling?
the result of delicate rearing, a sensitive
temperament, and a youth spent much in
solitary self-communion? Perhaps they
were; but they were real for all that.
They were not affectations, but facts —
facts involving as important issues as
the simpler feelings of less complex and
cultivated natures. To her they were so
real, so all-important, that the whole cur-
rent of her life was certain to be guided
by them.

During this pleasant season, but one
slight cloud crossed the shining heaven of
their new life. They had received letters
in the morning; in the evening, as they
sate at dinner, Lady Sylvia suddenly said

to her husband — with a sort of childish happiness in her face, —

"Oh, Hugh, how delightful it must be to be a very rich person. I am eagerly looking forward to that first thousand pounds — it is a whole thousand pounds all at once, is it not? Then you must put it in a bank for me, and let me have a cheque-book."

"I wonder what you will do with it," said he. "I never could understand what women did with their private money. I suppose they make a pretence of paying for their own dress — but as a matter of fact they have everything given them — jewellery, flowers, bonnets, gloves —"

"I know," said she, with a slight blush, "what I should like to do with my money."

"Well?" said he. Of course she had some romantic notion in her head. She would open a co-operative store for the benefit of the inhabitants of Happiness Alley, and make Mrs. Grace the superintendent. She would procure "a day in the country" for all the children in the slums of Seven Dials. She would start a fund for erecting a gold statue to Mr. Plimsoll.

"You know," said she, with an embarrassed smile, "that papa is very poor, and I think those business matters have been harassing him more than ever of late. I am sure, Hugh, dear, you are quite right about women not needing money of their own — at least, I know I have never felt the want of it much. And now don't you think it would please poor papa if I were to surprise him some morning with a cheque for a whole thousand pounds! I should feel myself a millionaire."

He showed no surprise, or vexation. He merely said, in a cold way, —

"If it would please you, Sylvia, I see no objection."

But immediately after dinner he went out, saying he meant to go for a walk to some village on the other side of the Rhine — too distant for her to go. He lit a cigar, and went down to the ferry. The good-natured ferryman, who knew Balfour well, said "*n Abend, Herr.*" Why should this sulky-browed man mutter in reply, "The swindling old heathen!" It was quite certain that Balfour could not have referred to the friendly ferryman.

He walked away along the dusty and silent road, in the gathering twilight, puffing his cigar fiercely.

"At it already," he was saying to himself, bitterly. "He could not let a week pass. And the child comes to me with

her pretty ways, and says, 'Oh, won't you pity this poor old swindler?' And of course I am an impressionable young man; and in the first flush of conjugal gratitude and enthusiasm I will do whatever she asks; and so the letter comes within the very first week! By the Lord, I will stop that kind of thing as soon as I get back to London!"

He returned to the hotel about ten o'clock. Lady Sylvia had gone to her room; he went there, and found her crying bitterly. And, as she would not tell him why she was in such grief, how could he be expected to know? He thought he had acted very generously in at once acceding to her proposal; and there could not be the slightest doubt that the distance to that particular village was much too great for her to attempt.

From Blackwood's Magazine.

THE FRENCH ARMY IN 1877.

PARIS, March 1877.

IT seems to be so distinctly to the interest of France that knowledge of the realities of her military position should not be limited to special students — it appears to be so self-evident that she can but gain by the formation throughout the world at large of correct opinions as to her strengths and her weaknesses — that her friends may justly feel that they are forwarding her cause by openly scrutinizing her situation. That situation, as it now is, presents certain facts and certain probabilities which it will aid her to indicate distinctly. That situation, of course, may change; new circumstances may arise; but in its actual form it points to two unmistakable conclusions: the first, that France cannot attack Germany; the second, that, if invaded, she can now, most certainly, defend herself. In other words, the present evidence goes to show that the maintenance of peace between the two countries depends on the will of Germany alone; that it cannot be endangered by France; but that, all the same, Germany will have real hard work before her if she tries to conquer France again.

To set forth these probabilities, to point out these presumptions, cannot fail to render a service both to France and to the general cause of peace. With such an object in view, it is certainly permissible to carry further our investigation of the state of the French army.

Signal progress has been made since

1875; more vigor has been thrown into the management; in many directions energy has been substituted for routine; force has gone on steadily accumulating; and, though defects of system and of management are still terribly numerous, though a large variety of points are still open to just criticism, the organization is so advanced, the general improvement is so real, that it may now be said, at last, that France has indisputably an army.

The causes of this amelioration are distinctly evident. Abundance of money is the foremost of them all; France has been able to pay for what she needed. The steady, zealous action of the regimental officers is, as manifestly, the second source of strength. And next may be classed, successively, the influences of opinion, of time, of experience, and of accumulated labor.

The war minister has been changed. General Berthaut has replaced General de Cissey. The new-comer is a man of undeniable ability and of much scientific knowledge. His book "*Des Marches et des Combats*" is, perhaps, though rather too condensed, the cleverest composition which has been written by a French officer since the war. He is excessively laborious. But his great qualities are mixed up with little ones: he is constitutionally afraid of trusting anybody, and tries, therefore, to do everything himself; as a necessary consequence he gets into arrears with his work, and he is of course cordially disliked by his *bureaux*. Still, in the utter dearth of genius which so strangely distinguishes the present generation of Frenchmen, General Berthaut may be regarded as a valuable functionary:

He is struggling honestly to root out faults and to suppress abuses; he is fighting conscientiously not only against disorder, but also against—what is almost as bad—too much order. With time he may succeed; but he has still a tremendous deal to do. Many of the gravest of the old deficiencies remain unremedied. The Intendance, for instance, is still in the same unsatisfactory position as before. A law has been brought forward about it, but though that law has passed the Senate it has not yet been discussed in the Chamber. The Intendance is still the marrowless institution which we saw hobbling through its work in 1870; it still fondly clings to its immemorial feebleness and to its hereditary defects. Even at the last autumn manœuvres, where every movement was exactly known beforehand, it seems to have felt that it would be a dis-

grace to it to do its work properly; so, to keep up its traditions, the troops were left occasionally without food. Whether the proposed new law will change all this remains to be seen. Its principle is, that the Intendance shall be deprived of independent action, and that it shall work exclusively and entirely under the orders of the general commanding. It therefore introduces unity into the army, and destroys the duality of powers which has thus far existed. With generals who are really generals this change would indisputably be a progress; but it may most legitimately be doubted whether actual French commanders, taken as a whole, and excluding certain brilliant exceptions, will be able to direct the feeding of their soldiers any better than they direct their movements. The system is a wise one; but where are the men who are to apply it?

It is consoling to be able to turn one's eyes elsewhere, and to recognize that, in certain other directions, the march ahead has been prodigious. The system of tactics has been entirely changed; and in no army in the world is the substitution of open order for close formations likely to produce better results. The new *règlement des manœuvres* is considered to be the best in Europe. It is admirably fitted to the temperament of the French soldier, and will enable him to exercise his personal qualities. If that *règlement* had been in force on the 14th and 16th of August 1870, it is not impossible that the battles of Borny and of Rézonville would have been victories for France. The *matériel* is, at last, almost entirely reconstructed; the fortresses and the entrenched camps which have been established to defend the open frontier are nearly finished—some of them, indeed, are already armed, stored, and victualled for a siege; the more essential of the new forts round Paris are terminated, armed, and even garrisoned. To do all this, one hundred and sixty millions sterling have been laid out upon the army in the five years between 1872 and 1876; ninety millions thereof have gone in ordinary annual expenditure, and seventy millions for special outlay on *matériel* and defences. The result is, that France has now reached a point at which she can at last begin, if necessary, to use the instrument she has created.

What would happen if she needed it? How would she manage a mobilization of her forces? On previous occasions we have examined principles of direction and systems of organization; in 1875 we looked

into actual details and immediate elements; this time, instead of appreciating the present, it will be more useful to gaze curiously at the future, and to try to estimate what a mobilization would produce. Mobilization alone would give the precise measure of the work done since 1871; it alone would indicate the ultimate realizable value of that work; it alone would supply a thorough, searching test of the military institutions of the country; it alone would furnish reliable evidence of the practical adequacy of the preparations made. How would it be carried through? Would everything break down again as in 1870? Would the results of the last war be reproduced under the present system? Would the helpless disorder of seven years ago be renewed all over again? Or has France at last developed not only an army, but also an organization which would enable her, in spite of the weak points of her system, to get that army rapidly, smoothly, and steadily into the field?

In seeking a reply to these questions, it is of course essential to commence by examining the rules which determine the conditions under which a mobilization would now be conducted. Those rules are detailed in the third section of the law of 24th July 1873 on the general organization of the army, supplemented by the additional laws of 19th March and 18th November 1875. It is prescribed in those laws that the French army may be mobilized henceforth either by a direct written order addressed to each individual member of the reserves and delivered to him in person by the *gendarmerie*, or that it may be called out *en masse* by the far simpler and more expeditious process of "*publication par voie d'affiches sur la voie publique, sans attendre la notification individuelle.*" By this latter plan (which is entirely new) every man liable to serve, whether in the active or the territorial army, may be directed to start off to the depot of his regiment without waiting for an individual summons; a simple posting-bill stuck up in his village will fix the day on which he is to join. This measure is so practical and so intelligent, that of course the Germans have just copied it from France. It cannot, indeed, be doubted that it will be successively adopted throughout Europe, and that it will be the only plan employed in all future mobilizations; for it implies a gain of two days in the joining of the reservists, and consequently in the concentration of troops. And, with war conducted as it is now, two days may mean a victory.

Unfortunately, however, the laws which set forth the duties of reservists are not all easy to be understood; they ought to be as clear as words can make them, but the latest and most important of them is, on the contrary, the least comprehensible of all the new military enactments. All the other laws, without exception, are to be carried into execution by some one in authority who can expound them to the soldiers under him; but the law of November 1875 relating to the functions of reservists, which is to be carried out, for a large part, by the reservists themselves, is couched in a language which must render it hopelessly unintelligible to laborers and peasants. And yet those laborers and peasants are supposed to be ready to obey it scrupulously, without any aid from anybody. It is true that extracts from this law are printed in the register-book which each reservist has in his possession; but what is the use of that if he cannot comprehend the extracts? Why, the mere title of the law is enough to frighten the best-intentioned soldier. It bears the scarcely credible heading of "*Loi ayant pour objet de coordonner les lois du 27 Juillet 1872, 24 Juillet 1873, 12, 19 Mars et 6 Novembre 1875, avec le code de justice militaire.*" And yet all this means in reality "Law defining the duties of the reservists of the French army!"

There is no space here to point out all the defects of this law, but a couple of examples of them may be given at hazard. One is, that the two totally distinct words, "domicile" and "residence," are employed in it perpetually, without any definition of the meaning of either of them. The other is, that it establishes two sorts of military justice — one for the active army, and one for the territorial corps. If a fortress is surrendered by a regular officer, he is liable to be shot; but if its capitulation is signed by a territorial commander, he can only be imprisoned. Crime in one case becomes misdemeanor in the other. Furthermore, while the code of military justice adopts the universal principle of never admitting extenuating circumstances for military offences, this law of 1875 concedes them in certain cases. All this is in absolute contradiction to the law of general organization, which declares (Art. 35) that "the territorial army, when mobilized, is governed by the laws and regulations which apply to the active army."

This law must be made over again. It must be brought into harmony with the principles and the practice of the other pre-existing army laws; and what is al-

most more urgent still, it must be made comprehensible to uneducated intelligences: it must indicate with explicitness and lucidity the duties which it imposes.

And when the law shall have been re-drafted — when it shall be rendered absolutely clear — it must be brought to the distinct knowledge of those who may have to execute it. On this point the military authorities have at their disposal a means of action of extreme simplicity, and of indisputable efficacy. Why do they not use the civil institutions for the purpose?

In France, as elsewhere, men occupy themselves more willingly about laws which assign rights to them than about those which impose duties on them. Every Frenchman knows, understands, and applies in his own person, the requirements of the electoral law. Why, then, should not that law and the mobilization law be made identical, so far as their prescriptions fit together, in all that concerns domicile and residence, for instance? Why not teach military duties by the very document which confers civil rights? The municipal law, also, might be utilized for the same end; for the mayors have now to play a part in the matter, and are destined to act as agents of the state in certain details of mobilization. Yet when that interminable discussion about municipalities took place in the Chamber, not one single word was said on this point — not one line was introduced into the law with the object of drawing the attention of the mayors to the fact that new duties devolve upon them in consequence of the new military organization of the country.

It cannot be doubted that, under such defective conditions as these, with everything new, undeveloped, and unpractised, there would be many hitches and some disorder in a mobilization.

And now that we have got a rough idea of the conditions and the imperfections of the law, let us go on to the practical working out of the process itself.

The walls are covered all over France with placards calling up the men; the mayors and the other civil authorities are spreading in their villages the news of the order of mobilization; the *gendarmerie* and the *employés* of the military offices of each district (the *bureaux de recrutement*) are looking after the men to the best of their power, and are serving notices and *feuilles de route* on all the laggards they can find. The men get ready as fast as they can; short time is allowed to them; both the placards and the *feuilles de route* specify the day on

which they are to reach their depot. How are they to travel to it? singly or in groups? Both plans have been tried during the partial callings-up of the reserves for the autumn manœuvres in 1875 and 1876. For short distances the men have been grouped; for long distances they have generally been allowed to go singly. Grouping necessitates a muster at the office of one of the districts into which France is now divided,* and this means loss of time; but it produces order, and it facilitates the payment of travelling expenses to the men, an operation which becomes extremely difficult when they travel separately. The question varies in importance for the different branches of the service. Infantry reservists have rarely to migrate very far to join, for (with the exception mentioned hereafter of the men from Paris and Lyons) they almost always belong to regiments which are quartered in their own immediate neighborhood. But for reservists of the special arms the case is often different; it has been found impossible to attach them all to regiments in their districts, and they (as well as the men on leave of absence from the infantry) may have to cross half France to reach their corps. For such of them as have money no real difficulty would however, arise from this; but the greater part of them would probably be either unable or unwilling to advance their railway fare, and in all such cases time would be lost by going to the district office for money, or for one of the railway passes which the military authorities are now empowered by the minister to issue. But the sole object of this new plan of mobilization by proclamation is to obtain speed and to economize not only days but hours. Why, then, should it not be enacted that travelling expenses may be advanced to mobilized soldiers (as in Germany) by the municipal treasurers or by the local tax-receivers? It is true that this could only be done on the production of a *feuille de route* specifying the sum receivable by each man, and that waiting for the *feuille* might involve a delay of a day or two; but, after all, that delay would not arise in every case, and furthermore, it would only represent the time necessary for the delivery of the *feuille* by the *gendarmerie*, and not the additional time required for a journey to the district office to fetch money. By this plan each man would find at once, even in the small-

* There are one hundred and forty-four of these districts, each one corresponding to one regiment of infantry, and controlling the reservists of that regiment.

est cantons, a resident local functionary prepared to pay him.

Let us, however, suppose that all these difficulties have been surmounted, and let us now follow the men to the depots of their regiments. Their arms, uniforms, and equipments are ready for them there; the men receive them, put them on, and then wait until the number of each article is inscribed in the books. The crowding is tremendous; the men are all on each other's backs, and in each other's way. According to the *loi des cadres*, the depot consists of two companies—that is to say, in peace time of about one hundred and fifty men; but the mobilization of the whole regiment brings in more than twenty-five hundred men on the same day! Where are they to be put?—where are they even to stand? There is another danger here, and it will be well to look to it in time.

Each of the sixteen companies of the regiment sends a *cadre de conduite* to the depot to fetch the men which belong to it. Each *cadre* is composed of one officer and a few non-commissioned officers and steady privates. Directly each group is complete, the men are marched away to the company.

But where is the company? In certain cases the depot is quartered with the service companies; but as a rule it is detached from them, and may be even at some distance. Until the late war they were always separated from each other; but such extreme inconvenience resulted from this cause during the mobilization of 1870, that the principle of keeping the service and depot companies together has been laid down since. In consequence, however, of the new distribution of the army into permanent regional corps, many regiments are quartered in places where no garrisons previously existed, and where, consequently, there are no barracks. The army, on its peace footing, is more numerous than it used to be. The abundant barracks which existed in Alsace-Lorraine have disappeared. For these various reasons, therefore, though the building of new barracks has gone on actively—though about nine millions sterling have been voted for them from State and municipal sources—it has not yet been found practicable to provide room enough in the *casernes* of each region to lodge the depots with the regiments. Two years must still pass before the change can be completely effected. It is only in the 1st and 7th corps (Lille and

Besançon) that the measure is thus far regularly applied. In the 2d corps, two regiments out of eight are separated from their depots; four regiments are in the same condition in the 3d and 4th corps: and so on with the others.

Another cause of difficulty in bringing together the depots and the regiments arises from the special organization which has been adopted for the garrisons of Paris and Lyons. The French active army is recruited all over the territory; conscripts from all the provinces are mixed up in the same regiment; and not only is no attempt made to group together men of the same department, but care is even taken to prevent that result, it being considered, for both special and general reasons, that great inconvenience would accrue from the bestowal of a local character on the regiments of the active army. But with the men of the reserve, as has been explained, the exactly opposite system is employed; they are attached exclusively (for the infantry, at least) to regiments permanently quartered in their own region; and the territorial army is composed on the same principle. For the troops of Paris, however (and to some extent for those of Lyons), an exception has been made; the reservists of the departments of the Seine and Seine-et-Oise are attached to *corps d'armée* of four different regions, whose headquarters and regimental depots are not in Paris, but in those regions. The result is that, in the event of a mobilization, all the reservists in Paris would have first to start off to their depots at Amiens, Orleans, Rouen, Laval, Le Mans, and all sorts of equally distant places, in order to get them equipped, and then to return to Paris, or go elsewhere, to their regiments. When it is remembered that the garrison of Paris and its neighborhood amounts to 120,000 men (more than a quarter of the whole active army), it will be recognized that a serious cause of delay will arise here. And there exists no present reason for supposing that this difficulty will ever be got over. It should, however, be added that, in peace time, this system presents many serious advantages: it mixes up the Parisians with the rural soldiers; it does not encumber the Paris barracks (where there is no space to spare), with the extra men belonging to the depots; and it keeps the system of *corps d'armée* intact and separate from the huge mixed garrison of Paris, which does not form a permanent *corps d'armée* by itself, but is

almost entirely composed of regiments temporarily detached from the surrounding corps.

As an attempt will presently be made to calculate the time which would be required for a mobilization, it is essential to complete, as far as can be foreseen, the list of the apparent causes of possible delay, so as to be able to allow approximately for their effect. It is, for this reason necessary to add to the catalogue of difficulties already enumerated, the observation that the rapidity of the first stage of mobilization may somewhat depend on the degree of organization of the regional and district magazines of stores. The organization of those magazines is determined by Articles 3 and 4 of the law of 24th July 1873: decentralization is its essential principle; not only must each region suffice for its own needs and borrow nothing from its neighbors, but each subdivision of each region is to be equally complete. Each subdivision corresponds to a regiment of infantry, and possesses two magazines. Those magazines are now ready everywhere. But several of the *corps d'armée* have no regional stores yet, and are still dependent for their supplies on the great central magazines. Thus, the 2d, 3d, and 5th corps draw their equipment from Paris; the 9th from Nantes; the 12th from Bordeaux; and the 13th from Lyons. All this is of course provisional, but how much longer is the provisional to last? France will not be really ready until it has disappeared for good.

It must, however, be acknowledged that, according to the experience supplied by the partial calling out of the reserves during the last two years, these provisional arrangements have worked fairly well. The men on those two occasions were dressed with sufficient rapidity: from five to six hours were required to equip the reservists of each company, and the only serious defect revealed was that the clothes in store were not sufficiently varied in size to fit all the new-comers, some of whom, consequently, could not be put into uniform at all. It is probable that the ministry of war has taken measures to remedy this, for the military newspapers took up the question energetically at the time.

Another fault which still remains uncured is the tendency of the officials of the ministry of war to delay things till the last moment, instead of doing as much as possible beforehand. The officers, for instance, have not yet got their *cantines* ready, either for luggage or for food. On

this particular point the arrangements are positively less forward than they were in 1870; for then each officer had his *cantines de campagne* at his own disposal, whereas now they have all been collected into store, and are kept there empty. The filling them at the last moment will be a source of delay and difficulty, and of much personal annoyance. As a mobilization can only be successfully performed on condition that every detail of it has been thoughtfully worked out beforehand, it is quite worth while to allude even to such seeming trifles as these. The minister of war does really seem, however, to be giving his attention to small questions of this kind. For instance, it has just been ordered that, in the event of a mobilization, each *vivandière* shall receive a horse for her cart, and that all carts shall be of the same model.

It was stated in a previous article that, during a small private trial of mobilization made some time ago, three days had been absorbed by the registration of the equipments supplied to two companies. It was obligatory, according to the rules then in force, to write down in three separate books, for each man, the number of every article supplied to him — of his pouch, his waist-belt, knapsack, cartridge-box, sword-strap, and gun-strap. Each number was composed, on an average, of six figures, so that each man required 108 figures, or 16,200 figures for the one hundred and fifty reservists of a company. The ministry has at last given its attention to this absurd abuse of red tape. Simplifications have been introduced into the system of registration, and the time required for the work has been reduced one-half.

Let us now suppose that all the men have passed through successive stages, from their homes to their company. The mobilization, properly so called, is terminated. Concentration is about to begin. The time has come to ask what is the strength of the army. How many men has the mobilization produced?

As military service, in various degrees, for successive terms of years, has become a universal obligation in France, it follows theoretically that all the young men between the ages of 20 and 25 ought to be found in the active army; that all those from 26 to 29 should form part of the reserve; and that all the men between 30 and 40 ought to be found in the territorial army and its reserve. But fact, in this case, does not quite correspond with theory. In reality, not more than about half the available men of each year appear in the

ranks of the active army. In order to explain completely the causes of this great difference let us take the last-published report of an annual conscription. It refers to the contingent of the year 1875.

The total number of young men available in that year was . . . 283,768
Of these—

29,797 were physically unfit.

42,268 were dispersed during peace, for family and other reasons.

19,508 were postioned.

25,778 were already in the army as volunteers.

4,295 were conditionally released, as professors, teachers, etc.

121,646

121,646

There remained, therefore, for service, 162,122

These men were dealt with as follows : they were divided (according to the numbers they had drawn) into two unequal parts, called the first and second portions of the contingent. The first portion was incorporated in the regiments for five years ; the second—from motives of economy, and for want of barrack-room—was called up only for six months,* and was then sent home on leave. The respective numbers of these portions were as follows :—

1st portion, for combatant services (including 7040 marines),	95,788
Do., for auxiliary services (Intendance, stores, etc.),	21,259
2d portion, for combatant services,	45,075
Total,	162,122

Furthermore, 8,345 men who had been postponed from preceding years were called up in 1875 ; 5,142 of them were placed in the first portion of the contingent, and 3,203 in the second portion, so carrying the exact numbers of the year to the following totals :—

1st portion : combatants,	100,930
Do., auxiliary services,	21,259
2d portion : combatants,	48,278
	170,467

It happened that the numbers of 1875 were rather below the average ; but, taking them as a minimum, they indicate that the combatant part of the French army, deducting the seven thousand marines, is

* Henceforth, the minimum duration of service will be a year instead of six months.

recruited in peace time at the rate of 93,000 men per annum, all of whom are supposed to remain for five years under the colors. But in consequence of the delay of about six months which takes place each year in calling up the conscripts, and of the fact that men are habitually discharged from their regiments six months before the expiration of their time, the term of real service is practically reduced to four years ; so that in peace time the army is composed of four times 93,000 men—that is to say, 372,000 men, plus 45,000 men for one year's second portion of the contingent, and plus, also, 25,000 men already in the ranks as volunteers. The general total of combatants, in time of peace, is therefore 442,000 men ; or, allowing for deaths, about 425,000. No deduction is, however, made here for men away on leave, who usually represent a considerable number.

And to this again must be added the *portion permanente*, which includes such members of the army as are independent of the annual contingent ; that is to say, the officers, the *gendarmérie*, the foreign troops in Algeria, the re-engaged men, bandsmen, and certain special workmen. This portion amounts, altogether, to 85,000 men, so carrying the final total to 510,000.

The reserve of the active army includes :—

1. Four classes of the 2d portion of the contingent, of 50,000 men each on an average, 200,000
2. Four classes of the reserve men from 26 to 29, at 150,000 each, 600,000
3. Four classes of the men dispersed during peace, at 40,000 each, 160,000

Total, 960,000

But, allowing for mortality and other causes, this total cannot be counted to produce more than 920,000 men. Adding thereto the 510,000 men under the colors, the general total available for the active army (not including the territorial corps) when all the reserves are called up, is 1,430,000 men. It may, however, be supposed that this total, though theoretically exact, would not be altogether realized in practice, and that the effective number would not exceed 1,300,000.

Here, however, we meet with a difficulty. The French army is now composed of nineteen *corps d'armée*, and of a certain number of unattached brigades, regiments, and battalions, consisting especially of cavalry and foot-chasseurs. The precise war-footing of a *corps d'armée* is

not yet determined by any special law; but as regards its main element—the infantry—no doubt is possible, for everybody knows that the companies are to be composed of two hundred and fifty men each. It is only as regards the cavalry, artillery, and train that any real uncertainty exists, and for those special arms the margin of possible error is limited. We may consequently adopt with tolerable confidence the following approximate computation of the fighting force of a French *corps d'armée*:—

It will contain—	
8 regiments of infantry, of three battalions each (the 4th battalion being kept in reserve); 24 battalions of 1000 men,	24,000
1 battalion of foot-chasseurs,	1,000
2 regiments of cavalry, say	1,600
2 regiments of artillery, 23 batteries, at say 250 men each,	5,750
1 battalion of engineers, say	1,200
Artillery train, 3 companies, say	750
Train, 3 companies, say	600
Total,	34,900

Say 35,000

So that on this showing, the 19 *corps d'armée* at their full war strength, would absorb 665,000

To which must be added the following troops, not included in the *corps d'armée*:—

32 regiments of cavalry, at 800 sabres,	25,600
11 battalions of foot-chasseurs,	11,000
57 batteries of garrison artillery,	14,250
144 4th battalions of the line,	144,000
Depots of the 144 line regiments, at 2 companies each,	72,000
Depots of foot-chasseurs,	7,500
Depots of artillery, 76 batteries,	19,000
Depots of cavalry, 70 squadrons,	14,000
Depots of engineers, train, etc.,	6,000
Railway and telegraph services, artificers, and sundries,	5,000
Pontoon-train, 28 companies,	7,000

General total of the active army and depots, 999,350

It results, therefore, from these figures, that although 1,300,000 men would be available in the event of a mobilization, only 999,350 of them could be utilized in the ranks in the first instance. The other 310,000 would remain *en disponibilité* at the depots, to fill up gaps as they arose.

An additional force of 25,000 excellent soldiers would be supplied by the coast and forest guards, all of whom have now received a military organization.

As regards mere numbers, therefore, the result is clear: France has positively

more men than she can use. Measured by quantity alone, a mobilization would produce too much.

But quantity and quality are not identical. The new army laws have not been in force long enough to have made all Frenchmen into capable soldiers; and out of the 1,300,000 men who form the mobilizable total, it is certain that, at this moment, not more than 750,000 are really educated. Of the remainder it may be estimated that about 300,000 have had six months' drilling, while 250,000 have never served at all. Still, as all the men of the two latter categories would of course be placed, in the first instance, in the reserves, it is quite possible that they would have time to learn their business, partially, at least, before they were sent out to fight. Consequently we may fairly say, not only that quantity is abundant, but also that quality is sufficient.

And now we reach the second part of the mobilization—the concentration. On this point we are altogether in the dark; for it is impossible to foresee the political or strategic conditions under which a war-mobilization might have to be effected. The minister of war himself could not speak with any certainty on the question, especially as, in the case of a defensive campaign (and that is the sole theory admissible in the present case), the defender can initiate nothing and must necessarily adapt his own movements to those of the invader. It will, however, surprise nobody to learn that the French Staff Office has at last applied the Prussian system of drawing up a plan of action at the commencement of each year—an “academic” project, as the Germans call it. An attack is supposed; its possible conditions are conjectured and weighed, and, according to the then situation of the French army and to the available information of the state of the other side, a scheme of resistance is prepared. An imaginary mobilization is composed on paper; the probable points of concentration are indicated; the *corps d'armée* are grouped up into fighting armies; their commanders are selected; everything is prepared. It is scarcely necessary to add, that the details of all this are kept profoundly secret; but the fact that it is done is known, and that fact supplies a striking proof of the progress which has been effected.

As regards the exact nature of the concentration, therefore, nothing whatever can be said. But as regards the time it would occupy, we are able to make reasonable guesses. Could both mobilization and

concentration be completed in nineteen days as it was by the Germans in 1870 — or in fifteen days, as it is believed that they could do now? Perhaps not. It is prudent to admit at once — but without attempting to be precise — that France would be slower than Germany. Yet notwithstanding the possible and even very probable causes of delay which have been set forth here, there is no just reason for supposing that the difference would be considerable. It could hardly exceed three or four days. This opinion is based upon a calculation which can easily be verified. In 1870, according to the official reports, the order of mobilization was sent out on 14th July; it was calculated that the arrival of the men at their regiments would be terminated on the 31st — not including the concentration into *corps d'armée* and armies, which was to be effected afterwards. Now, however, according to the actual plan of keeping the infantry reservists in the same regions as their regiments, a notice issued on the 14th could order the reservists to be at their depots on the evening of the 17th. The 18th would be passed in equipping them. They could start the same night for their regiments (which in most cases would not be very far off), and on the morning of the 19th each company could be on its war footing. Counting, however, another forty-eight hours, to compensate for the possible delays which have been enumerated, it follows that it is now possible to do in seven days the same work that took seventeen days in 1870. It is true that, as regards the special arms, whose reservists would have greater distances to travel, the time might be a little longer; but, allowing largely for that contingency, there seems to be no fair ground for doubting that the mobilization (properly so called) could be finished in a time which could scarcely exceed twelve days in all.

The concentration of the regiments into brigades, divisions, and *corps d'armée*, and of the *corps d'armée* into armies, could probably be effected in ten days more, for everything is ready.

It may therefore be asserted — so far, at least, as apparent probabilities can guide us — that the entire process might be completed in a time which would range between eighteen and twenty-two days.

And even if France were a little longer over it than Germany would be, no perceptible disadvantage to her could result from the delay; for, as it is morally certain (as will be shown presently) that France *cannot* attack Germany, and that, if another

war takes place, the attack must be made by Germany, it follows that the invader would have to travel a greater distance to the fighting ground than the defender would have to cover, and would therefore lose in distance what he might gain in time. Consequently, as regards speed, the two sides would probably find themselves on a footing of virtual equality.

Well, we will now suppose the concentration to be completed, conformably to the exigencies of the situation as it may present itself at the time. The troops have formed up into three or four fighting armies, and have drafted off the frameworks of the garrisons of the great intrenched camps, and of the forces destined to guard Paris and Lyons. In estimating that six *corps d'armée* would be required for these latter purposes, and that the other elements of the garrisons would be supplied by the reserves and the territorial army, we shall not, probably, be very wide of the truth; if so, thirteen *corps d'armée*, out of the total of nineteen (the nineteenth having of course been brought over from Algeria, where it is habitually stationed), would be disposable for action in the field. It has been shown that each *corps d'armée* would number about 35,000 men, so that on this calculation the army on the frontier would amount to 455,000 men — a figure which would most certainly be amply sufficient to begin with. It would be backed up by the rest of the 1,300,000 men of the active army — that is to say, by 210,000 in the intrenched camps, by an unconcentrated second line of 325,000, and by an unutilized depot reserve of 310,000 more.

And it must be borne in mind, that if instead of leaving the 144 fourth battalions unconcentrated, they were at once developed into regiments, a large part of the unincorporated reservists could be immediately thrown into them, and a second series of complete armies, amounting, with cavalry and artillery, to at least 350,000 men, could be got together. Plenty of non-commissioned officers could be found amongst the one-year volunteers who would have rejoined. Forty-five thousand of those young gentlemen have now passed through the army; and though the institution which has produced them is most objectionable, and is on the point of being abandoned, they would, at all events, serve a useful purpose in this case. The front army would of course require part of them to keep up its supply of *sous-officiers*, but eight or ten thousand of them could easily be spared to start the extra compa-

nies suggested here. This second series of armies could be established either by grouping two fourth battalions to form a new regiment, or by converting each fourth battalion, with the addition of the two depot companies, into a separate regiment. In either case the unutilized reservists of the original regiment would be at once incorporated into the new regiment thus formed.

This general scheme of action would fit in equally with either of the hypotheses of victory or defeat, provided always that the garrisons of the entrenched camps were constituted at the very commencement of the concentration, and not at the moment of a disaster. The troops which occupy them would have fighting to do, for the great space covered by these camps, especially by the fortifications round Paris, would render investment very difficult, if not, indeed, impossible, and would in all probability oblige the Germans to try to storm them. For the same reason, sorties on a large scale against extended circles of attack might confidently be looked for. It is therefore of extreme importance that the defence of these positions should be organized at the very origin of the campaign, and that it should be intrusted to thoroughly solid troops.

The successful holding of fortifications depends, however, in these days, almost as much on the power of the artillery on the ramparts as on the vigor and tenacity of the garrison; and in the organization of their *artillerie de forteresse* the French have still a great deal to do. Each of their nineteen brigades of gunners includes three dismounted batteries, making fifty-seven batteries in all. It is, then, with the men of these fifty-seven batteries that, thus far, the French army is supposed to be able to serve the immense defensive works which have been constructed at so much cost! There is here one of those strange negligences which puzzle foreigners. Why has this essential point been so neglected? Why, after six years of organization, is France still unable to completely man her ramparts? The mixing up of garrison and field batteries in the same brigades is an inexcusable error; they ought to be separated at once; and the fifty-seven batteries of heavy guns ought to be carried as rapidly as possible to two or three times as many. Until this is done, the question of the practical defensibility of the new forts will remain somewhat in doubt; for though, of course, it may be said that sailors can be called up to work the batteries, yet

still, from a military point of view, that solution settles nothing.

It is now time to go on to the territorial army and its reserves, of neither of which has anything been said yet.

The territorial army includes, theoretically, all Frenchmen between the ages of thirty and thirty-four, and its reserve takes all those between thirty-five and forty. But as no attempt whatever has been made, even on paper, to organize the reserve of the *territoriale*, it may be left out of the account, for the present at all events, as a non-existing force. The territorial army, properly so called, is, however, on the contrary, a progressing reality. It is composed, nominally, like the active army, of five annual contingents. As there are scarcely any exemptions, each of those contingents may be roughly guessed at two hundred thousand men; its general total would seem therefore to reach one million. But that figure is illusory; it allows nothing for mortality or for other causes of diminution; and furthermore, the one hundred and forty-five regiments of infantry into which the *territoriale* is divided, are composed, by law, of three battalions of one thousand men each, and can only absorb, therefore, 435,000 men; so that, allowing the additional proportion of 120,000 more for cavalry, artillery, engineers, and auxiliary services, the utilizable total of this force would not exceed—or, perhaps, not even attain—555,000 men. Practically, indeed, it would be wiser not to count on the mobilization of more than 500,000—the surplus men, if any, remaining disposable for ulterior needs. Of that number it may be calculated that, at the present moment, about 280,000 are old soldiers of the active army, that 120,000 served in the last war as *mobiles*, and that the remaining hundred thousand have had no military training. The ratio of old soldiers is, however, increasing now each year with the regular application of the universal service law, and from and after 1886 every man in the territorial regiments will have passed through the active army. Meanwhile those regiments contain a large proportion of men who have been non-commissioned officers, and who would, for that reason, contribute to the rapid instruction of the others.

As regard the officers of the *territoriale*, the situation is not very satisfactory. About two-thirds of them (8000 out of 12,000) are appointed. They have been selected after a personal examination, and such of them as happen to be retired offi-

cers of the active army will of course do their work well. But it is notorious that political and social considerations have been largely consulted in choosing these officers, and that most of them have been named, not because they were soldiers, but because they were gentlemen in position or Conservatives in opinion. Certain applicants who were professionally capable have been excluded because they were too Republican. Furthermore, it is becoming more and more difficult to find candidates for commissions both in the territorial regiments and in the reserve of the active army. It is absolutely forbidden to officers of those two services to wear uniform off duty; consequently the applicants who thought it would be agreeable to them to swagger about in red trousers find their dream unrealizable, and no longer pursue it. Then, again, though there is no pay (except when under arms), officers have to provide their own clothes and equipment. Finally, almost all the great financial and industrial institutions of the country, with the Bank of France at their head, have very practically, but not very patriotically, announced to their *employés* that if any of them accept a grade in either the reserve or the territorial army, they will instantly be dismissed from their places. The result is, that by refusing the permission to wear uniform when not convoked for service, all the vain-glorious aspirants have been discouraged; by obliging officers to pay for their dress and arms, all the fortuneless are driven away (and the fortuneless are numerous); and by proclaiming incompatibility between clerkship and soldiering, a great part of the lower *bourgeoisie* is shut out.

The result of all this has been, that the enthusiasm of 1873 — when crowds of men of all ranks petitioned to be made officers of the *territoriale* — began to die out in 1874. In 1875 it became necessary to reduce the difficulties of admission; non-commissioned officers of the *mobile* were admitted to the examinations for the reserve artillery; soon afterwards the same measure was extended to all other arms. It was constantly declared that each examination would be the last, and that the list was on the point of being closed; but more examinations followed all the same. Their level was lowered; and only last month the *Journal Officiel* of the army published another new programme, still less developed than its predecessors, for another series of examinations in April.

These insufficiencies are, however, of no very serious importance; they supply some further evidence of the want of military administrative power which is so strangely evident in the present generation of Frenchmen, but they will not do much real damage. If a war broke out, it would at once be seen that the *armée territoriale* is not a mere imaginary corps; officers would then be forthcoming in any numbers, for everybody would have to serve. The resources of France would not be limited to the active army and its reserves; the territorial troops would rapidly acquire value, and would present a very different character from the *mobiles* of 1870. It is true that they are not yet in a state of cohesion which would permit them to render immediate service as a separate army; but they may certainly be relied on as auxiliary forces, the more so as they would not, in all probability, be needed so much for campaign work as for guarding *étapes*, for keeping open communications, and for aiding to supply garrisons for the intrenched camps, and for Paris and Lyons. And it should be particularly remarked that the engineering element of the *Territoriale* will be most useful, for it will include the most effective part of the corps of *ponts et chaussées*.

The organization of the *Territoriale* is now quite complete on paper, but the men have only been called together once, for one day, to receive their register-books. At least a month would be required (supposing even that their arms and uniform are really ready, which does not appear to be quite certain) before the battalions could be formed into regiments and brigades.

Still, notwithstanding, it must be repeated that the *Territoriale* presents sufficient elements of number, of solidity, and of reality, to justify its admission henceforth into the list of the disposable forces of France.

Recapitulating the figures at which we have now successively arrived for the various elements of those forces, it appears that the entire combatant strength of which France could now dispose (one-half of it within three weeks, and the rest successively), would be made up as follows: —

Field armies,	455,000
Camps and garrisons,	210,000
Unconcentrated troops,	325,000
Unincorporated men at depots,	310,000
Total of active army,	1,300,000

Brought forward, . . .	1,300,000
Forest and coast guards, . . .	25,000
Territorial army, . . .	500,000
General total, . . .	1,825,000

In 1870 only 250,000 men could be concentrated in a month, while the reserves and garrisons did not, at first, reach 300,000. The position is therefore completely changed; money, work, and time have, in spite of obstacles and incapacities, converted the French army into a machine of power.

For what purpose can this machine be used?

Can it possibly be employed for attacking Germany?

Or is it, by the force of things, utilisable solely and exclusively for defence?

To obtain answers to these questions it is essential to look at them from three different standpoints—to measure the strategical, the material, and the political considerations which seem likely to influence the action of France.

When the Germans took the Alsace-Lorraine fortresses, and surrounded them with additional fortifications, which have rendered them impregnable without a long siege, they thereby rendered it virtually impossible for France to undertake an offensive campaign. The annexation of those fortresses has turned out to mean something more than territorial conquest, something else than homage to a German sentiment; it is now proved to be an act of the profoundest military wisdom. They close the road to Germany.

The experience of recent campaigns, and especially of 1870, has clearly shown, that though an army can advance into hostile territory without immediately investing the fortresses on its way (unless, indeed, they contain a numerous garrison, in which case that garrison must of course be watched by a more than equal force), it is scarcely possible to advance at all—with the masses of men which modern war puts in motion—unless the invader has a railway at his complete disposal for the carriage of his supplies. It happens, however, that the new German strongholds between France and the Rhine would, in consequence of the space covered by their fortifications, be, of necessity, heavily garrisoned in the event of a French attack, and that it would therefore be indispensable to invest them at once. Such an investment would mean the immobilization, for an undetermined period, of a force which can scarcely be estimated at less than 400,000 men. But the loss

of the Alsace-Lorraine fortresses means much more than this; it means, also, the total stoppage of all traffic on the railways which pass through and are commanded by those fortresses. Consequently, supposing even that France were able to devote 400,000 men to the merely secondary task of reducing the lateral obstacles in her path—supposing that she had enough men to besiege several first-class fortresses, and to simultaneously conquer all the German armies in the field—she would not, even then, have the command of a single railway until one or more of the fortresses were taken, and would have to contend, meanwhile, against difficulties of transport, which it is impossible to suppose that she could overcome. The holding out for a few weeks of a little place like Toul caused the very gravest difficulties to the Germans in 1870, because it deprived them of the use of the line to Paris, which passed under the guns of that fortress. What would happen then to the French, with their inferior organization, if such an obstacle arose in every direction at the very origin of the campaign, if they had to try to fight their way ahead without a railway? Turn and twist this difficulty as you like, you cannot get over it. There it is, absolute and unchangeable. If, then, we follow up the idea of an attack by France on Germany, we are bound to suppose, first, that all, or nearly all, the 1,300,000 men of the French active army can be brought on to German soil at the very commencement of the campaign; secondly, that the supplies for, say, 800,000 men (no weaker army could be supposed to force a road against united Germany), could be carried regularly to constantly increasing distances *in carts*.

It is surely needless to pursue such an hypothesis as this.

Yet, all the same, let us go one step further, in order to exhaust the wildest possibilities of the case. Let us conceive (if we are capable of so mad an imagining) that the armies are forthcoming, that all the fortresses are invested, that the Germans are defeated and are driven across the Rhine, and that the French follow them and advance into pure German ground. An offensive war under such conditions, with the prodigious quantities of men which would be employed on both sides,—with all the Fatherland in arms in front, and with all the men of France surging onwards from behind,—would necessitate a vigor of command, a unity of action, a perfection of administration, which would imply not mere ordinary

capacity, but the very highest genius, in the chiefs. But are we justified in presuming, from what the world has seen of the French army since Waterloo, that the needed genius would be there? Can the most earnest, the most enthusiastic, the least reasoning friend of France pretend that the experience of the last fifty years justifies the hope that there is one single soldier in the French army who is capable of discharging so tremendous a task?

No.

It may, however, be urged — it has, indeed, been urged occasionally in private talks — that though, in scientific war, Germany is, for the moment, incontestably superior to France; though, in this generation, the thinking power of battle appears to lean most heavily to her side; yet that France has sometimes shown a might of an altogether special kind, a might peculiar to herself alone, a might which rides down obstacles and which extorts success from impossibility. Twice, in recent centuries, has that outbreathing potency revealed itself; it was awakened for the first time by Joan of Arc, for the second time by the French Revolution. It was the potency of an idea, of glowing ardors, of hot passions; it was resistless then: but would it conquer now? Are fervors capable of overthrowing science? The contrary result is probable. The conditions of war are so radically changed that emotions would only be in the way, and the more fervid they were the more cumbersome would they be. If some totally fresh sentiment, some unknown and uninvented quantity, some new "French fury," were to unveil itself tomorrow, it would simply break its heated head against the cold wall of science.

Neither strategically nor materially, nor even emotionally, can France expect, then, to fight her way into Germany in our time.

And the political obstacles in the way of an offensive war are not less important or less real. By the constitutional law of 16th July 1875, it is enacted that war can only be declared with the consent of the two Chambers. Under what conceivable circumstances is it to be imagined that the two Chambers would vote a voluntary attack on Germany? Where is the minister of war who will dare to proclaim once more that "France is ready"? Where is the president of the council who, "with a light heart," will mount into the tribune and call on France to fight again?

No conditions are reasonably supposable under which all this could happen; and certainly, so long as the republic lasts,

the world will see nothing of the kind. The republic has no dynastic interests to serve — no personal or special reasons for desiring a *revanche*. On the contrary, it has everything to lose by war: for if war produced victory, a successful general might make himself dictator; while, if it produced defeat, a Bonapartist *quatre Septembre* would immediately become possible.

And then, again, France longs earnestly for peace; she shrinks instinctively from all idea of conquest. Of course she would take back Alsace and Lorraine if she could get them; but would she provoke a war (even if she believed herself to be quite ready) for the sole purpose of regaining them? Solferino, Mexico, Mentana, would not be voted now by the Parliament at Versailles — nor "Berlin" either.

One more point should be looked at. France has vainly sought for an ally since 1871. She has not found one in Europe: and perhaps it is lucky for her that she has failed; for we may rest assured that, if she had succeeded, the very instant the news got out that she had signed an offensive and defensive alliance — no matter with whom — the German armies would instantaneously have been mobilized and France have been invaded. She has, though, one unprovoking ally at her disposal — an ally who is waiting for her at home, and whose precious aid she would lose the very instant she crossed the frontier. That ally is not a nation or a monarch, it is simply — distance.

France at home has every man at hand; France in Germany would be forced to leave a constantly increasing proportion of her soldiers behind her to guard the road she has followed. And, as the argument applies equally to both sides, it follows that just as France would lose by distance if she attacked Germany, so would she profit by it if she were herself attacked. It cannot be argued that the transfer of the German frontier to this side of the Vosges in any way diminishes the difficulty of distance for Germany; if she were to enter France again, she would have at once to contend with it — and it is in that fact that France would find her only probable ally.

These reasons are evident, simple, and real. Nobody will deny their truth. France cannot attack Germany.

But if she is attacked, she can, most certainly, defend herself. After six years of loitering, hesitating, and bungling, she has at last — almost in spite of herself — manufactured an enormous army. She

may be incapable of using it to the best effect, or of extracting from it all that it is susceptible of producing; but, however weak may be her management of it, the material force is there. She still needs two years to finish up the details; she has still to finally terminate her *matériel* and her fortresses, to re-model her garrison artillery, to re-organize her Intendance and her staff corps. But all the really heavy work is done. She is ready now to fight upon her own ground if needful. At home, one-half of her difficulties would disappear. Her fortresses and her entrenched camps would supply her armies with magazines and solid *points d'appui*. Her railways would furnish ample means of transport from the rear. Of course she will grow stronger with each year; of course with time her army will steadily improve; of course its faults will gradually diminish,—at least it may be hoped so. But it is an army *now*; and it is useful not only to declare that fact, but to add to it the distinct statement that if Germany were to once more raise the menace of two years ago, France would no longer depend for her existence on the intervention of Europe. She would, most assuredly, accept that intervention gratefully and heartily, in order to avoid war; but she no longer imperiously needs it, as she did in 1875, to save her from destruction. If another “scare” burst out to-morrow, it would find her, at last, in a situation to efficaciously protect herself. She would no longer talk of withdrawing her useless soldiers behind the Loire, and of leaving the invader to overrun an undefended country. If Germany again proclaimed the wish to crush up France for good, before she is fit to fight, France would, this time, look her calmly in the face, and would say to her, in the consciousness of sufficient strength,—

It is too late.

From The Nineteenth Century.

IS THE PULPIT LOSING ITS POWER?

“*Quam pulchri super montes pedes annuntiantis et prædicantis pacem!*”

ST. PAUL must at least be credited with a far-reaching glance over the future of the kingdom of which he was the foremost minister, when he wrote in the beginning of the gospel, “When in the wisdom of God, the world by wisdom knew not God, it pleased God by the foolishness of preaching to save them that believe.”

And the commission, “Go ye into all the world, and preach the gospel to every creature,” reveals at any rate a marvellous foresight of the work which the preacher of that gospel was destined to accomplish for mankind. It was by a sermon from bold, firm, but quite unlearned lips, that the movement was inaugurated which has since grown into Christendom, and is now, by more silent though not less potent agencies, visibly overspreading the earth. Men went forth preaching “Jesus and the resurrection,” and from their generation we date, not our years only, but a new movement of human society which is filling the world with its pressures and progresses still.

We are assured authoritatively by serene censors that all the force which was once in that movement has quite spent itself, and that this gospel of “Jesus and the resurrection” must be struck out of any reliable estimate of the forces which are working for progress in the deeper springs of society. And yet somehow it refuses to be struck out. Quietly, but mightily, in the midst of the bright Saturnian realm which pure intellect seeks to restore, theology with all that springs from it is holding its place in the front rank, and is mixing itself, with an energy which shows no sign of decay or weariness, with all the practical interests and activities of mankind. It concerns itself, apparently in increasing instead of decreasing measure, with the foremost questions which occupy the attention of the statesman, and it enters, to an extent unparalleled probably since the great Puritan age, into the familiar household intercourse of our times. Those who advise us quietly to ignore it, and to lay it up with the lumber of dead superstitions, little dream how they are strengthening the hands of the party which they chiefly dread, and whose stronghold is the Vatican; perhaps they may be startled some day by the outburst of fanaticism which they are preparing, and which will be formidable precisely in the measure of their success. There is no rest possible for man in nescience, or in any negation. He needs a rock and not the pivot of a balance to sustain him; and the end of a long course of painful balancings has always been a swift rush downwards towards an abyss.

But, whatever may be the destiny of Christianity in the future, no student of history can ignore the power of the preacher in relation to its first establishment and its earliest triumphs. It is the

preacher rather than "the pulpit" — which represents the preacher expanded into an institution, with more or less detriment to his vital power — with whom we have to do in the early days of the gospel. They had no pulpit, those men who shook the world — happily for them — and happily for mankind. But it did please God, "by the foolishness of preaching," to make what must be confessed on all hands to be a mighty impression on human society — the foolishness in this connection really meaning the purest wisdom, that wisdom which looks like foolishness only to fools. The work of the kingdom of heaven was done mainly by the preacher, because it was a history, the tale of what had actually been said and done by a living man upon this earth, and not a discipline or a philosophy, which had to be planted in the belief of mankind.

They were simple preachers, sent, as St. Paul declares, "not to baptize, but to preach the gospel," who, by the confession of their opponents, before many years had passed away, had "turned the world upside down" — that is, right side up, with its face towards heaven and God. That Godward aspect and attitude it has since maintained, though in a very confused and blundering way; and it has been greatly helped by its preachers in its aspiring effort, and, alas! in its blundering too. I am not inquiring here what reason we have for believing that there is a living reality above this Godward attitude and aspiration of Christendom. But, as matter of fact, it cannot be questioned that those ideas about God and divine things, and about man's relations to God and to divine things, which these men proclaimed, have been before the face of Christendom and in some measure in its heart through all these Christian ages; and as little can it be questioned that through all these ages Christendom has been the focus of a vital activity and progress which bear indisputable marks of superiority to every other form of the activity of mankind.

The preacher continued to be the main power of the new movement, while the ideas and the forces which Christianity brought to bear on men were at work within the bosom of the empire. The new spirit strained the old bottles of the Roman imperial civilization to bursting; while it wrought at the foundations of a new empire in the West, mainly over peoples of Teutonic blood, wherein that policy of large comprehension which was the prin-

ciple of the Marian party, and was adopted by Cæsar and the Cæsarean house, was carried up by the Roman see into a higher region, and became charged with more pregnant results. The empire meanwhile, having been mastered by the spirit of that East which it had conquered, as Diocletian's keen insight discerned, withdrew itself to the south-eastern corner of the continent. There, in its fair marble palaces by the Bosphorus, it guarded its priceless literary and administrative heirlooms during the stormy age in which the West was growing to its manhood; it shielded them from wreck with a steadfast courage and a successful tenacity which are among the wonders of history; and it yielded them up at last in its heroic death, only when the West was ready to receive them, and to scatter them by its discoveries and settlements through the habitable world. It would not be difficult to show that the spirit of the new faith was the most formidable of the invaders of the empire, and the most fatal solvent of its system. It was manifest from the first that a new theatre, in which that spirit should be able to work on the very foundations, would be needed for the structure of Christian society.

The power of the preacher was a main factor in the early stages of the culture of Christendom; for it had to do with the moral ideas, the aims, and the hopes of men — by which things societies grow. And it continued to be a chief factor through all the formative ages of its growth, until that decay of old institutions began which was the first warning of the Reformation. Many, no doubt, will be disposed to question this estimate of the value of the preacher's influence, and would attach a very much larger importance to the manifold secular influences which were at work. Influences of various orders work together happily in society, as in nature. Rain, dew, frost, storm, the juices of the earth and the air, combine benignly for the nourishment of the plant; but the sunlight is supreme, and, where fruitage is in question, rules over them all. After the same fashion the sacred and the secular seem to some of us to be related harmoniously in the order of the great human world.

At the Reformation this power of the preacher, which had been prostituted in the Roman Church to the very basest uses, broke out with overmastering energy, and assumed the leading place in the conduct of the new movement when it first arose. The preacher became organized

as the pulpit; he became, as was inevitable, a Church institution of permanent form and power, co-ordinate with the written word, which was exalted to the chief place of authority in the ordering of human affairs. The idol of Church authority was dethroned; but there was no little danger lest the letter of the word should be set up as an idol in its room. How nearly that came to pass even in Luther's days, that lamentable conference with Zuingle, in which the great reformer chalked "*Hoc est corpus meum*" in large letters on the table between them, as though that settled the controversy, and insisted that "God was above mathematics," too sadly reveals. But we shall never understand the spiritual movements of our own or of any other generation, unless we see that God's controversy with idols and idolatries is the main controversy of the world, as in Bacon's and still older days. In all communities, in States and in Churches, whether Established or Non-conformist, Papal or Protestant, Eastern or Western, idolatry is the besetting sin; and God is striking at it here and now as hardly, as sternly, as in the darkest days of Jewish history. Till we all, preachers, priests, and philosophers, understand this, and stir ourselves to destroy the idols of the flesh and of the mind which stand between us and the light of truth, we are walking in a vain show, and "Babel" is written over our life.

Speaking generally, we may say that the written word, which is the mere flesh of the living word, took the place of the word of the Church, which is its counterfeit, and which had come to be a doctrine of lies no longer endurable by honest hearts. The ancient inspiration preserved in sacred records took the place of that present inspiration of which the Church professed to be the mouthpiece, but which had been found to be a lying oracle. We may look upon it as inevitable that the letter of the word should be exalted to be the supreme arbiter and guide of men, while that enlightened conscience of Christian society is being educated by Scripture and experience, which, higher than Church authority or written document, is the true organ of the Holy Ghost. The vision of this lay behind Hooker's great argument; the truth of it was at the root of George Fox's doctrine; and its development is the one progress for which it is worth while greatly to strive and to hope. Men were in a way bound in the order of their culture to try what power there might be in a written word to rule

the disorder and to guide the movements of society. And the very experiment was a wonderful emancipation, inasmuch as it set men to search the Scriptures, and to judge for themselves with a new sense of responsibility to God and to man for the conduct of life. It fell in too with the working of the newborn art of printing, and with the new learning, which was rapidly making all things new in the intellectual sphere. But none the less does the rebuke of Christ lie as sternly against the Protestant as against the Jewish literalist: "Ye search the Scriptures, for in them ye think ye have eternal life, and they are they which testify of me."

Then arose in Protestant Europe two great schools of thought or streams of tendency — which took up the inheritance of older schools — as men pored over the Bible to discover there the guidance which, through the overthrow of the authority of Rome, they had lost. The one, of which the Covenant was the moderate and the Fifth Monarchy the fanatical form, would subject the whole order of things in a Christian state to the express legislation of the word of God as expounded by the competent interpreters. By this scheme the Bible would become what Mahomet made his Koran, simply a book of directions, bearing similar Dead Sea fruit. The other looked towards absolutism, the supreme authority of the head of the State in all ecclesiastical and civil affairs. The English Reformation, not being primarily the fruit of a popular movement, tended from the first in this direction, but it developed in strong force the antagonist party who held to the absolute right of the word of God. The two ideas of the Christian government of men alike arose out of the need of filling up the enormous gap in the system of belief and the daily conduct of life which had been left by the overthrow of Rome. The one lay behind English Puritanism; it worked itself out into nobler and freer form, and came to the front in English Independency. It passed over the ocean with the "Mayflower" pilgrims, and had free course in New England, where it attempted the complete organization and conduct of a political society, with very remarkable and interesting results. In England, though the Independents, whose fanatics were wild for the kingdom of the saints, won the victory, the experiment of a State set trimly square with man's interpretation of the statutes of the written word happily failed of a complete trial, because at the head of the Independents and of England

was neither a pedant nor a fanatic, but a far-sighted and strong-handed ruler of men.

The theory of the divine right of kings which was put into clear form by James I. — who, fool as he was in a moral sense, had a keen eye in his head, and a clever knack of putting things into form — was really the child of the Reformation, though it might appear to descend from the empire. And let it be said for James that the overthrow of the authority of the Church as the supreme regulator, though at last much in the background, of the public life of Christendom, left a gap which the written word as expounded by the divine — and James had known fully what that meant — did not seem to supply. Society craved, as it always craves, a firm authority whereby to guide its steps. Public opinion in these days, when it has room and time to take its complete form — and we have recently watched the process of crystalization — expresses the judgment of the enlightened Christian conscience. It brings its materials from far, and it digests and elaborates them with sore travail and pain; but out of the crucible comes forth at length the judgment of the "ermine-robed great world," that "everybody" who is wiser than the seers, stronger than the kings, holier than the priests.

But in those days the very crucible was wanting, and it is not to be wondered at that thoughtful men, seeing the need of a firm authority to which some sacredness should attach, should find it at first in the head of the State. I confess to a tender feeling towards that divine right of kings when it was young, because it is the direct parent of the divine right of peoples, and was the only possible form in that age of the challenge of secular society to the alternative doctrine of the divine right of priests. The true divine right lies neither with the one nor with the other, but with the truth how and where soever it can get itself established. Each school had its measure of truth to contribute; but secular society would in those days have lost the power to contribute anything if it had not been for the strong-handed authority of kings. And so that "new monarchy" with its clearly despotic tendencies, of which Mr. Green writes so ably, may have had an important function to discharge with regard to the orderly development of popular liberty. It was the form in which the State was rising to the consciousness of its unity, was feeling its strength, feeding its intelligence, and preparing itself,

when it should find out in time that kings could do little more to help it than popes, to take into its own hands the management of its affairs.

"*L'état, c'est moi!*" said a king once with sublime complacency. That is precisely what a pope has just said of the Church, "*L'église, c'est moi!*" and what the Syllabus shows that he would say of every State in Christendom if he dared. The monarch's affirmation was, at any rate, good against the priest's. It was the sign that secular society had attained to its majority, and it is the line through which we inherit our popular liberties. No sooner was the doctrine formulated than the people began to bring their strength to bear on its limitation and regulation. When it was pilloried as "the right divine of kings to govern wrong," the movement was far advanced which would dethrone the sovereign ruler and enthroned the sovereign people in his room. That process we have now completed; we shall begin to see with what results. It may be that we shall find that the doctrine of the sovereign people, in whose inspiration Mazzini believed as passionately as the Curia believes in the pope's, has not fathomed the matter to its depth. Neither king, nor priest, nor people, will be sovereign in the final order, the order of the kingdom of heaven.

By the same age and the same influences, working in another direction, the power of the preacher was developed. The pulpit became a recognized and powerful institution in Protestant communities, and made a vigorous effort to take into its own hands the conduct of all mundane affairs. Behind Puritanism, which leaned strongly to Presbyterianism, there lurked the notion that a State governed by magistrates under the direction of an assembly of divines would present the fairest image of the kingdom of heaven. That notion the Independents shattered, and it is one of their noblest services to English society. And there was sore peril of its being tried at one time. Baillie, who saw plainly enough how the matter stood in the Westminster Assembly, wrote to Scotland, with amusing frankness, that they did not propose to meddle in haste with Independence, "till it please God to advance our army, which we expect will much assist our arguments." But there was hidden from his unprophetic eye the "crowning mercy of Worcester," and that flash of the sun out of the rain-clouds, as the psalm, "Let God arise, and let his enemies be scattered," rolled down the ranks of the Ironsides on the morning of Dunbar.

The preacher rose as the expositor of the new law which was in every man's hand, and which was recognized as supreme. We can hardly realize in these days the intense interest with which the men were observed and followed, who were able to bring forth the riches of this new treasure to the world. The desire for knowledge is the most sacred and consuming appetite of our nature. The troops of poor, ragged, starving scholars, who followed a man like Abelard to gather even crumbs of the bread of thought, were the heralds of the throngs who in the next great age of revival hung upon the preacher's lips, hungering for a yet more precious bread. And the preacher's realm was a wide one. Our modern sharp division of secular and sacred had hardly in those days dawned upon the minds of men. And, let me add, it would never have dawned on ours if those men had not so persistently amalgamated them in the crucible of their words and deeds. We talk loftily of the confusion of things secular and sacred in the life of those struggling generations. But it is just that confusion which has evolved our modern order. We can keep the two spheres fairly disentangled, simply because what we call secular was thoroughly leavened in the kneading-trough of those centuries with the ideas and influences of spiritual truth. So the skilled expositors of the Bible attained at once and most naturally to a position of recognized dignity and influence, which, through many shocks and changes, they have retained to the present time. The question arises, is it now passing away?

The mediæval Church knew how to make a mighty use of the preacher, and some of the greatest movements which have shaken society have owed their birth to the power of the word on a preacher's lips. But the pulpit as an institution can never occupy the most prominent place in the system which attaches such supreme importance to the discipline administered by the priest. And the Protestant Churches which adopt a formal order of service and rite can hardly place the pulpit on the level which it occupies in churches adopting a freer order, and holding the Pauline view of the power of a preached gospel. Some of the very noblest works of English literature are by divines of the Anglican Church; but the preacher is, on the whole, mainly to be looked for in the free and unestablished schools. We must not follow him to New England, where he held a position of exceptional advantage

while the "gristle" was growing to "bone" in the infant State. There the State grew out of and round the Church, as in Israel of old, with very curious results on which we have not space to dwell. But the preachers were great powers in the State until they lost their heads and their Christian hearts in the witchcraft panic. After that storm had passed, their influence was never fully restored.

In the old country, too, they played a notable part in the great drama of our history. Preaching ran mainly in the Puritan blood. The lectureships in the city churches were filled chiefly by men of the Puritan school, and they became a great power, and did much to nourish that spirit of civil and religious independence which made London the backbone of the Parliamentary party in its struggle with the crown. Laud saw how they were working, and conceived from them "a distaste of sermons." Again, after the Restoration, the preachers on both sides of the pale told powerfully on their times. But the men who could stir and shake the souls of the masses must be looked for, on the whole, in the ranks of the Nonconformists. And naturally enough, for the pulpit was the citadel of their strength. They too were "in opposition." They had to do with that class of the people which is the core of strength in every State; and they stirred their hearers to an energy and interest in public questions which made them a kind of vanguard in the army of progress. The battle of our liberties has been largely fought by the religious element in the community, greatly helped, no doubt, by the thinkers. "Neither the polish of Erasmus nor the benignity of Melancthon," Heine says, could have carried the Reformation, but it needed "*die göttliche Brutalität* of brother Martin." So, in our history, the hand that has struck and conquered has been mostly strung by religious enthusiasm, though the nervous currents have no doubt been reinforced from serener springs.

Nobly on the whole, during those generations, the preachers wielded their power, and strenuously they wrought by it on and for their fellow-men. The great outburst of evangelical zeal which marked the last half of the eighteenth century in England was truly a form, and a very blessed, angelic form, of that movement towards the poor and wretched, the tormented and oppressed, which in France took the form of the fury of revolution. We have yet to measure the magnitude of the work of

those indomitable preachers in saving England from a dread baptism of blood in that fierce revolutionary time, by kindling some belief in a God who cared for men, and some loving trust in men who cared for men, in the heart of those vast classes who are verily the dangerous classes in such crises as these. The danger lies in their misery and despair. Those who can bring solace to their misery and preach hope to their despair save them and save society. It was thus that Christianity saved a world which was literally perishing of despair and wretchedness, and it was thus that the evangelical revival in the age of revolution helped greatly to save our State. The hope which its preachers kindled, the charity which they quickened, the brotherly relations which they established with the poorest of the poor, the schools and the ministries of all sorts which grew out of their labors, have sweetened unspeakably the bitter waters of our social and political life, and have left room and time for those large measures of wise and righteous legislation which have marked this century, and have made us on the whole the healthiest, the wealthiest, and the happiest of peoples.

Whatever the Evangelical school may have come to — and it is benignly appointed to all schools in time to decay — it will be written of it in history that in two great ages of revolution it brought an influence of incalculable magnitude to bear on the moral ideas, the social relations, and the spiritual hopes of the poorest of the people; and it helped thereby, beyond all other agencies, to render possible that orderly, peaceful, but large and rapid development of our nation which finds no parallel in the political history of mankind.

The dark side of the sphere of the preacher's influence is found in the narrowness of the pale within which he is prone to enclose both himself and the Church. It is truly "a pale" which the Evangelical Churches have managed to establish; and, like a celebrated political pale, it has borne sorrowful fruit. Preachers and people within the pale make for themselves but a small and dreary kingdom of heaven. At least, it looks dreary enough to "those who are without." And yet we little dream what Christendom owes to the large free world which is opened in the Bible. Its manifold richness and variety, the succession of history, law, essay, drama, prophecy, and psalm, each of them masterpieces of art, opens a grand intellectual and imaginative expanse to its

disciples. If we contrast the narrowness, the dryness, the dulness of the Koran with the play of glorious living light over the broad fields of Scripture, we shall better understand both the monotony and the sterility of Moslem civilization, and the rich, free life of Christian society. The men who were shut up to the Bible — and at a most critical era it was the one reading-book of the masses — were at any rate shut up in a large and fruitful world. And in these last generations, in multitudes of English families, the Bible and its literature has been the one intellectual interest heartily allowed. It is in Evangelical circles that the preacher has chiefly reigned. The Roman Church has employed him constantly as a kind of galvanic shock to a stagnant generation, as the missionary is employed now within the Anglican pale; but he has not been looked to for the supply of the daily bread. But a sermon is regarded as *de rigueur* in all Evangelical services — even a prayer-meeting being considered a somewhat flat affair without an address; and it is distinctly by the power of the preacher that in this circle congregations are gathered and sustained.

And it is here that the poverty and narrowness of the intellectual realm have been most conspicuous. Preachers, having to do with the largest themes, easily fancy that they and their people are brought out into a large world, forgetting that, though the world may be a large one, they may be content to tramp in a very dull and narrow round. The religious household, shut off from the world — we must remember what kind of world it was — occupied itself to a large extent with religious exercises and activities, while its intellectual pabulum was furnished, in a measure which would be little suspected, by the religious magazines. I remember a thriving tradesman assuring me, about thirty years ago, that his magazine was as much reading as he found that he could get through in a month. I remember, too, that about the same period I was reading the *Athenaeum* in a railway carriage, when a perfect stranger asked me, with a tinge of that pious bitterness which, alas! is about the most acrid of all things, whether "Henry" and "Scott" would not profit me much more. It is easy to be contemptuous over such narrowness. But my tradesman friend was the representative of a considerable class. He was a shrewd, successful man, he was of weight in his circle, and he brought a good deal of influence to bear on municipal and political

affairs. It is safer to try to comprehend such men than to despise them.

It is easy to understand how, in certain conditions, the pulpit might wield an influence not altogether commensurate with the ability of the man who might fill it. The institution would have a solid weight of its own, greatly magnified by the absence of anything which could compete with it in its sphere. The preacher would easily rule and be made much of in his little world. Again it is very easy to be contemptuous, and to say that in so blind a kingdom a very one-eyed man might easily be king. But this would overlook some of the essential conditions of the matter. Stern critics of the splendid ceremonial of the mediæval Church are apt to forget that a cathedral during a grand function was an unbought vision of a very bright world to multitudes of the poor. It was the one thing, and a very grand and imposing thing, which took them out of the squalid region of their dreary and monotonous lives. And if it took them up even a little above the excitement of wine, gambling, or lust, by so much it was a clear gain to them and to the community. There is much to be said for the lives of the saints from the same point of view, had we space to deal with it, and to show how their incredible marvels, and their easy playing with the fixtures of physical law, were balanced by elements of influence which it is safest not to despise.

In Evangelical churches the splendors and the marvels alike vanished; but the preacher stood up, a not ignoble substitute, in their room. The services of the sanctuary were a bright break in the order of a somewhat monotonous life. With little to compete with him, the preacher had an eager audience around him, and in the general dearth of culture he was tolerably sure to be superior to his audience, and to have some real light on various themes to afford. This is not the place to estimate the deeper interests and results of his ministry. But the most indifferent to these might find some satisfaction in reflecting that, if he helped to make his flock self-satisfied in a narrow world, at least it was a world in which purity, modesty, domesticity, frank intercourse of classes, and ministry to ignorance and need were sacred traditions, whose fruits help much to sweeten the atmosphere of that larger world in which we are living now.

But the power of the pulpit as an institution is manifestly on the wane. The next idol of the religious world will not be the preacher, but the priest. About a

generation ago, influences began very visibly to work, which have told powerfully on the position which the pulpit formerly enjoyed. A flood of cheap and, on the whole, valuable literature has overspread the country, and has entered homes hitherto most jealously guarded from intellectual raids. The freest discussion of the most sacred truths is carried on in periodicals of the highest character and the widest circulation. Fiction of the best type appears in magazines for Sunday reading. Games and amusements which our fathers would have regarded with horror are made free to the children of pious households; while a comparison, for instance, of Mrs. Marcet's "Conversations on English History" with Mrs. Armitage's "Childhood of the English Nation," will reveal the enormous advance in knowledge of the most complete and valuable kind which the work of one short generation has brought within the reach of all. The circle of interest, too, in homes has widened immensely, and as it has widened the one main interest of the old time has in some measure suffered eclipse. In the Wales of fifty years ago, the ministry of a man like Christmas Evans filled a great space in the way of interest and excitement; now revivals have to be managed on a great scale, with all the art and effort which make success in business, if they are to lay hold on men. These new conditions demand, not a pulpit only, but a man in it of no ordinary power. If he holds his own against the pressure, it must be by force of superior nature and culture. The institution is comparatively nothing; the man, as Heaven has endowed him, is all.

Dogmatism, using the word in no ignoble sense, is a great element of strength in the pulpit, and it has been sadly shattered by the breaking up of the systems of theological thought which has marked our times. The dogmatists are now perhaps to be found in the philosophical school. There has been, too, a great drawing away of the abler men of the young generation from the work of the ministry, from various causes, not the least of which is the uncertainty which has reigned in the theological sphere. It has touched the strength of all Churches; though I am disposed to believe that now that we have got out into a freer world the worst is past, at any rate among the Nonconformists. But the new conditions at which we have glanced present the gravest difficulties, graver perhaps than any which preachers have had to face in any period of Christian history. And yet, in a sense, the times are with

them. Their platform is knocked from under them; the institution feebly upbears them; the class as a class, the profession as a profession, is of far slighter account than of old. But if a man can preach, if his word is with power, never perhaps was there a time when he had a more open field for his activity, or a fairer hope of influence on a large class of his fellow-men.

Mr. Spurgeon's truly remarkable ministry can by no means be overlooked in any thoughtful estimate of the work of the preacher in our times. We may have our thoughts as to his theology, and yet hold him in hearty honor for the firmness with which he has stood so long in slippery places, growing wiser and stronger under influences which would have been fatal to most men, and for the hold which he has maintained on multitudes who, but for his ministry, would have been morally and socially wrecks. And quite recently London and all our great towns have been stirred to an extent hardly paralleled in history by the American revivalists. Whatever we may think of their methods, it cannot be denied that for a time the interest was profound and universal. It was altogether the dominant topic while it lasted. Their preaching was a matter of such large public interest that, Nonconformists as they were, it drew forth a thoughtful and kindly letter from the primate; while all classes, from the highest to the lowest, swelled the throngs which hung upon their lips. The influences which are sapping the order of things which made the pulpit a great power in its time, favor the preacher if he knows how to handle them. As far as this aspect of things is concerned, there is little sign that the foolishness of preaching is about to perish out of the world.

But, after all, does this touch the real heart of the subject? Granted that the solid middle class has been touched or even moulded by the pulpit, there is the great working-class at one end of the scale, and the great cultivated class at the other. Does not the one regard it with rough indifference, and the other with polished scorn?

The relation of the working-classes to the pulpit is part of a far larger question — how are they likely to stand affected to such a Christianity as Christendom has to present to them, which one sometimes thinks has little but names in common with that gospel which the poor "heard gladly" of old? Then the truth came to them from outside the sphere of their wrong and suffering. The preacher came

as a reformer, and held out to them a large hope. The restless longing of the poor was on his side. Now he is part of the system — a system which somehow suffers the city slums and the village lairs of the poor to grow up in the heart of a Christian civilization. Their slums and hovels are the fruit of their own improvidence, say the censors. There is justice in the answer, "Had you been nursed under such conditions, perhaps it might have been thus with you." Be that as it may, the preacher has now at his back the whole system of things of which, rightly or wrongly, the poor complain. There are the pomp, the wealth, and the respectability of Churches, established and free; the former connected in their minds with exactions and tyranny, the latter with interested professional zeal. There must be a great breaking up of things before the working-classes can be brought into any fair relation with the preacher and his gospel. But when the shock is over — and there are signs that it is at hand — it is in the Bible that the preacher to the poor will find "the word in season" to proclaim their needs, to assert their rights, to expound their duties, and to rule and hallow their lives; nor know I anywhere a vision so charged with a blessed and beautiful hope for the poor as the Scripture vision of the kingdom of heaven.

I confess to being very sceptical as to this alienation of the masses from the truth as it is in Jesus. I fear that it is the Christianity which is wanting, and not their interest and hope. We know what a pastor of a right noble Christian type could accomplish at Eversley; and wherever a man or a woman clothed with meekness, or the power which is fed from the higher springs, goes forth on a Christlike errand of mercy, where are they so sure of loving reverence and loyal honor as among the poorest of the poor? Were the Master with us, "Blessed be ye poor!" would be his sentence still.

But at the other end of the scale there is the rapidly growing intellectual class, which we are told is coming to regard the preacher and his unverifiable assertions with quiet indifference or scorn; and it is confidently predicted that, as culture advances, the pulpit, and the whole system of things in which it is a power, will be left behind among the worn-out superstitions of mankind. There can be no doubt that there is a peculiar virulence in the tone of some of the doctors of the school which has now justly the ear of the public towards the preacher and his thoughts and

ways. And hence arises a truly formidable danger. But I hold that for this antagonism the pulpit is mainly responsible. It is reaping as it has sown, and it has to pass through its time of humiliation. The preacher readily entertains the notion that the whole scheme of things is laid out to his small understanding in the word of God. He seems as if he came down on the vast range of subjects which he is tempted to handle as from a superior height; and this is what the scientific mind can never endure. The place of theology in the sphere of man's knowledge tempts its doctors to believe that it confers the right of speaking with a certain decision on all kinds of topics; and there has always been a sort of omniscient tone in the pulpit method of handling intellectual questions which stirs fierce rebellion in cultivated minds and hearts.

And the kingdom of heaven which we have preached is but a narrow and poverty-stricken realm. There is something which unprejudiced minds, minds not formed in a groove of belief, find it impossible to receive, in the idea of God, his methods, and his purposes, which our popular theology has presented to mankind. How much of this unbelief of our times is of the texture of the unbelief of Lucretius, a revolt against incredible conceptions of nature, of man, and of God? Revolt is mostly blind at first, and there is great blindness now to the inner light, the hidden life, and the higher world. But it is blankly incredible that men can long rest content in their blindness, and that the great questions of being which have perplexed and tormented all the human generations since man emerged on the platform of this earth to sin, to suffer, and to be redeemed, can long be laid to rest by the nescience of a knot of professors, who shut out from their field of thought all that man has cherished as his dearest possession, and, while professing to confine themselves to positive knowledge, confuse themselves with hopelessly untenable metaphysics. In truth, signs are not wanting that it will not be long before the question of the "above" and the "beyond" again forces itself even on agnostic sight. The pulpit has had a grand opportunity, and has wasted it. In all ages there have been preachers who have borne on the torch in the van of progress, and, like their Master, have paid by suffering for their power to lead mankind. Such lofty spirits have not been wanting to our own. But the pulpit, on the whole, has cast in its lot with the narrower view and the poorer realm. It has

treated its Bible as a book of directions, rather than as a light by which to see the way. Perhaps there is a season of great darkness before us, or a great fanaticism, or a dreary "centre of indifferences" to pass through on our way to the "everlasting yea" of the future. There is truth in the idea that this is the positive stage of our development. Nothing can be juster than the law which Comte has formulated. First the theological stage, then the metaphysical, then the positive. But the development has yet to complete itself in the circle, and, gathering up the fruits of these successive efforts to penetrate the mystery of truth, satisfy with a larger, diviner theology, man's aching, longing heart.

The preacher will best help that consummation by letting the light of his gospel shine clearly, and troubling himself for the present little with theodicies. We are not God's advocates, we are his witnesses. We have no case to establish for him or for his truth. We have simply to bear witness to the truth wherever or however we discern it, and leave God to be his own advocate, and truth to win its own victory. What is now chiefly needed is a new conviction of the reality and the power of the life which we believe was manifested in the Redeemer, and is the true light of men. For teachers who know that eternal life, who can utter its word by their lips, and show its light in their lives, there will be need and work, not through this generation only, but through all generations, till the final fire.

We may venture to speak of "the final fire," for here science is at one with revelation. The sun's furnace seems to be fed by the cosmical matter which is constantly being drawn in. Slow changes in the orbit of our earth surely prophesy for it a similar doom. "The elements shall melt with fervent heat." And then is it all ended, and forever? Is the man of this vanishing world a part of the system of things which is doomed to perish, the highest outcome of all the toil and struggle of creation? With infinite pain "the creature" has brought him forth, and has made the highest form of him the man of sorrows; for philosophy now pleads passionately that as man rises in the scale of culture he must arm himself for suffering and sacrifice. Her chosen symbol also is the cross. And are all the toils, the tears, the aspirations, the heroisms of the human generations to be swept into the Gehenna, mere fuel for the cruel wasting flame? If this be truly the human outlook, there remains but to retrace an an-

cient lesson, and to study again the art of suicide as they studied it in imperial Rome. The elder Mill is right; if death is to break the bench of life forever, life is a business that does not pay. The belief that this is but the threshold of existence, that man is the meeting-point of two worlds, that the creature who is the head and crown of the natural is born a child into the spiritual and eternal sphere, and that the issues of life's toils, tears, and martyrdoms lie beyond the gate of death, has furnished to man the inspiration to endure. But this, we learn from those who would bury life in profound and hopeless sadness, is illusion, benign illusion; when it has strung man's energy to toil and suffer, its work is done, there is nothing beyond! One thing only is wanting further—some knowledge of the demon who has made, and who rules, the universe on this scheme of illusion, and has been able to persuade the human generations to toil, to suffer, to agonize, upon a lie.

No! while the bird still "flies into the lighted hall out of the night, enjoys the brightness and warmth for the moment, and then flies out again into the night," the "whence" and the "whither" will be the absorbing questions of interest to mankind. And it is in "the great congregation," where heart beats with heart in concord, and breaths conspire, where common beliefs and common experiences draw the children of toil and pain into close, dear fellowships of sympathy and hope, that the answer will best be given, and the man who can utter it will be most lovingly heard. There is a power in public worship, in the utterance of common sorrows, needs, and hopes, in the prayer that is breathed and the praise that is sung in concert, not with the crowd that fills the sanctuary, but with the innumerable company of all lands and ages who have drunk of the same spring and gone strengthened on their way, which they strangely miss who teach that worship is a worn-out superstition, and that only in the clear light of law can men walk and be blest. While man sins and suffers, while there is blood-tinged sweat upon his brow, while there is weeping in his home and anguish in his heart, that voice can never lose its music which brings forth the comfort and inspiration of the gospel—which tells the sin-tormented spirit the tale of the Infinite Pity, and bids it lay its sobbing wretchedness to rest on the bosom of the Infinite Love.

J. BALDWIN BROWN.

From The Philadelphia Weekly Times.

THE QUEEN'S GRAY HAIR.

FROM THE FRENCH OF JULES JANIN.

TRANSLATED BY HELEN STANLEY.

ON the night of the 1st of August, 1793, the guardian of the prison of the Conciergerie was busy arranging a little cell situated at the end of a long, black corridor. The cell was dark, damp, and unhealthy; daylight scarcely ever reached it, and when it did it seemed as though it fell regretfully athwart its heavy iron bars that were full of rust. In this miserable little room, the jailor placed a small iron bed, covering it with two straw mattresses, a sheet, a blanket, and by the side of the bedstead left a small earthen wash-basin and a little stool. Surely if the guardian of this prison made such preparations as these, he must have been expecting the arrival of some important person to occupy it. Alas! it was the queen of France, the daughter of Maria Theresa of Austria, who was to arrive.

It was three o'clock in the morning; already the sky was colored by the rosy tints of an August dawn. It was no longer night, nor scarcely yet day—it was the hour when often the queen of France, opening the window of her apartment in the palace at Versailles, would await alone in silence, and in happy reverie, the sun's first rays and the first songs of the awakening birds. How beautiful the gardens of Versailles were at that hour! The crystalline murmuring of its fountains, as the water stole softly between green lawns and luxurious flowerbeds, the crowd of statues around them seeming as though they were still asleep, the superb old trees which had overshadowed the great king and the great century, the sombre paths where Bossuet had walked, and further on, at the end of the great avenue, the Little Trianon, the marble cottage of which the queen was shepherdess; such was the scene which used to greet her eyes. But on this day we name, at three o'clock in the morning, the queen was rudely awakened from her slumbers. "Get up! get up!" they said to her, for she was to leave the Temple for the Conciergerie, the cell she then inhabited being thought too good for her. She arose at the voice of the two *gendarmes* and got into a small common cab with them. The blinds of the carriage were lowered, so that the royal captive should not see the bright dawn even through its dirty windows. There were to be no more

happy dawns for the queen, no more summer's sky, not a bird to sing, not a flower to bloom; the executioner was all that was left to her.

Reaching the Conciergerie, its heavy door soon closed upon her, and it seemed as though she already knew all the ways of this new prison, so quickly did she pass through its gloomy corridors. She walked through this obscure labyrinth as calmly as though she were traversing the gallery of Lebrun to enter the king's apartment. Then suddenly, from its narrow door, its menacing aspect, and its approach guarded by spies, she divined the cell that was intended for her and entered it. They brought her the jailer's book, in which she signed her name with a firm hand, then taking out of her pocket a white handkerchief she wiped her lovely forehead several times, which was covered with great drops of perspiration from having driven for so long in the closed cab in which she had been shut up with the two *gendarmes*; after which her gaze fell upon the damp walls that surrounded her. She saw at a glance all the new misery about her, the cold stones, the iron doors, the low-vaulted ceiling, all the nakedness of her tomb. For an instant her heart sank, but she soon regained her noble calmness. Then taking from her bosom a little watch, which they had left her, she saw it was four o'clock. She then hung her watch on a nail which she discovered in the wall, which was its sole ornament, and as she had said her prayers the night before on going to bed in her other prison, she undressed herself to lie down on the iron bed, with its poor straw mattresses.

There was in the queen's cell the guardian's wife and her servant, who was an honest little Breton maid, who, pitying the queen, offered to aid her to undress herself. The queen was astonished at this kindness, and on looking at the young girl she discovered her face was full of sympathy, and could hardly believe her eyes. "Thank you, my child," she said to the young Breton peasant, "I have waited on myself for a long time now," and then she lay down. Two *gendarmes* guarded the cell, named Dufrene and Gilbert.

She remained thus for forty days, with no other misery than the misery of every new day—a widow and alone, having not a word of news of her son, the king of France; not a word of news of her children; not a word of news of Madame Elizabeth! No other sound than the

grating of her iron doors, as they opened and shut to change the guards. No other noise than the rumbling of the *charrette* as it rolled away each morning, carrying its daily food to the monster guillotine.

But toward the middle of September Fouquier-Tinville went into the queen's cell, drunk with rage. All of the republic was in excitement about this prison. The guards were changed, the jailer was put in irons, and they placed a sentinel before the window of this unhappy woman, and he walked before it day and night. It was, you must know, because a little pink had been thrown in at the queen's window and fallen at her feet. She supported these new outrages without complaining; she was passive, like the beautiful marble which represents Niobe, and so calm and sad that the coarsest jailers became silent as they approached her, and took off their hats involuntarily. For once the sentinel who marched beside her window did not dare to look into her cell, for there seemed to radiate from it a holy sadness which commanded respect. One day she said to the little servant, "Rosalie, comb my hair," and bended toward the young girl her beautiful head, which was to fall so soon, with its lovely locks, whose beauty had inspired all the poets of the day—Tullastasio first among them. The jailer forbade Rosalie to arrange the queen's hair, however, and, saying it was "his right," he endeavored to take it out of the young maid's hands; but the queen arranged it herself—no one but the executioner having a right to touch her thenceforth. When she had arranged her lovely blonde hair, which grew about her forehead with so majestic and natural a grace, she parted her curls in front and covered them with a little perfumed powder, and then she put on a simple little cap which she had worn for twelve days. The next day, being kindly disposed, the Revolution permitted them to bring from the Temple to the queen a few batiste chemises, some handkerchiefs, *fichus*, silk stockings, and a white peignoir for the morning, a few nightcaps and some little bits of white ribbon. The queen smiled sadly as she received these poor relics of her former grandeur. "Ah!" she said, "I recognize my sister's kind thought of me in these." For it was Madame Elizabeth herself who had sent these clothes to her. When seeing all this unexpected wealth the queen took courage, and asked for a second mourning cap; but finding she could not pay for it "she thought, perhaps, there was enough lawn in her one cap to make two." Tell

me, do you know a greater mourning than that, or one so humbly worn?

The order was that the prisoner should not be allowed any books or paper, or even thread or scissors, in order, no doubt, that she should be deprived of everything that might distract her from her sorrows. But she, however, finding a little bit of old carpet in her cell, pulled out the threads from it, and with them amused herself by making a little braid, her knees serving her as a cushion and some pins doing the rest. Sometimes on Sundays her jailor brought her a few flowers in an old earthen pot, which alone would make her smile sadly — she who never smiled any more, and who loved flowers so dearly. Ah! the lovely flowers of Trianon, the dear friends of her leisure hours! The sweet roses she cultivated with her own hands, the pinks that bore her name, the tender marguerites that bloomed at the caressing touch of their queen, and the soft, pearly dew which fell from those multitudinous fountains that were silent neither day or night. Ah! the fields enamelled with wild flowers that she loved to wander in, shaded by her large straw hat, or the white does that would come to eat out of her small white hands; ah me! where had they fled, those happy days?

Soon the jailer ceased bringing her any roses; they gave the captive too much pleasure, and he was afraid of Fouquier-Tinville. They saw that the queen, too, loved the sweet face and tender, pitying look of the young Breton peasant girl, so they placed an enormous screen to separate them; but sometimes with difficulty, Rosalie would stand on tiptoes and look over the barrier, as though to say to the poor queen: "I am still here, madame." But then those moments were so short.

Behind this screen were placed the *gendarmes*, and with them a liberated convict, named Barassin, who was so dirty that when he would leave the place for a little while, the queen, made almost ill by the foul atmosphere of the cell, would beg Rosalie to burn a little piece of paper to change the air. Rosalie had obtained permission to brush the queen's shoes. They were pretty little black kid ones, which easily could have been taken for Cinderella's, so small they were. All France had been prostrated before these two little feet, that would have been adored for their beauty alone, even were they not the feet of a queen. The cold and humidity of the prison floor clung to these light shoes as mud would have done on a winter's day. One day a republican *gendarme*

even took pity on them, and taking his sabre scraped with care all the moisture which covered the tiny soles.

In the adjoining courtyard, with eyes fixed on the iron bars that separated them from their sovereign, were kept some prisoners from the Temple, royalists devoted even to the death. There were aged priests of the Church, old officers of Fontenoy, and some noblemen forgotten by the guillotine, and all of them forgot their captivity, their present misery, their approaching death, to think only of their queen, shut up there in her miserable cell. And so it happened that when these poor unfortunates saw the *gendarme* wiping the queen's shoes, they held out their hands to him in supplicating prayer, and he out of pity passed one of the little shoes between the bars to them, who, taking it, kissed it with reverent, faithful lips.

At twelve o'clock the jailer would bring the queen her dinner, which consisted of half a chicken and a few vegetables, which she was forced to eat with a common pewter fork. The queen would eat this from off a little table, no one waiting on her. More than one prisoner, though, would wait till her meagre repast was over, and beg for some of the crumbs which had fallen from this poor, but still royal table, and happy and proud was he who could drink from the queen's glass; for bending low, with uncovered head, he would drink to her Majesty's health.

There was neither bureau, or wardrobe, or even a little mirror in her cell, but after many prayers the queen obtained permission to have a small paper box in which to keep her few clothes, and a tiny looking-glass, which she hung on the same nail where she had kept her watch, and on that day she was as pleased as though they had brought to her the loveliest Venetian mirror and the handsomest furniture in Boule.

Soon, however, the Revolution thought it was too much luxury for the queen to have half a chicken and a plate of vegetables for her dinner, and it suppressed half of her already small ration, so that even the market-women had no longer the consolation of saying to the prison cook, "Here, monsieur, take this poor chicken to our queen." But even in this complete abandonment, in the mists of this horrible poverty, and overwhelmed with all her sorrows, she still remained the lovely woman and the great queen of her prosperous days; and she held out her pewter cup for the jailer to fill with water from an old earthen jug with the same majestic grace she was wont to hold the golden

goblets at the royal *fêtes* of Versailles — her lovely white, but cold hands, her beautiful, calm face, only half seen in the dim prison light, her elegant and majestic figure, and her silence full of resignation. Ah! who could forget them who had ever seen her in the Conciergerie? But she was failing little by little under the influence of bad nourishment and air, and from her grief and loneliness, but she never complained. She was dying slowly and silently.

Her linen all wore out, and asking Rosalie to try and procure some more, the faithful little peasant gave some of her own coarse underclothes to the queen. Poor woman! She no longer even knew what o'clock it was, for her hours now were only marked by the departures for the guillotine in the morning, the death-warrants read out at mid-day, and by fresh imprisonments at night. These desolate time-markers were all that divided her days spent in that terrible prison, which was crowded with so many sorrows, for they had carried away her watch, which she had hung on the nail on entering her cell. It was a simple little ornament in enamelled gold, which her mother had given her when she was yet a young girl, ignorant of life. It had never left her, and recalled so many happy hours to her. When dauphine, and then queen of France, and even in the dungeon of the Temple she had never worn any other watch, but it was taken from her "by order of the nation," and she wept bitterly when she handed to the officer of the republic the gift of her mother, Maria Theresa of Austria. They took from her also two pretty rings ornamented with diamonds, which was all that remained to her of her past fortune. She loved to wear them, and would amuse herself changing them from one hand to the other, and the little diamonds shone on her slender fingers like her blue eyes from out her pale, sad face. But that was not all! They ruthlessly tore from her marriage ring, given her by the king of France, and which was the last and touching relic she possessed of the martyred sovereign. Ah! you barbarous madmen, had she not paid for it dearly enough, this unhappy woman, that you could not have left it to her? She had paid for this gold ring with her youth, her beauty, and even with her head. This golden ring had made her queen of France, but of what a France? Queen rather of a volcano. This golden ring had placed her on a throne, but a throne crumbling. This golden ring had opened for her the doors

of a palace, but a shattered palace. This golden ring had given her a royal bed, but a bed that a maddened populace had torn to pieces with bloody bayonets. This golden ring had affianced her to a king, but a king beheaded. This golden ring had made her mother of a king, but a king who was given over to a cobbler who killed him with brutal treatment. This golden ring had made her sister of a saint, Saint Elizabeth, who was insulted and covered with ignominy. This golden ring had given her friends, but friends proscribed from France, or whose heads fell upon the scaffold. It had given her a friend (the Princess de Lamballe) who was violated, beheaded, and whose heart was eaten by the cannibals. Ah! if the murderers of that time had known better how to play their part of torturers, far from taking it away from her, they would have suspended this golden ring before her night and day! If they had known that the widow of Louis XVI. wore a lock of the king's hair in a locket over her heart, and that she held it to her lips morning and evening before she said her prayers, no doubt they would have tried to find it in the queen's bosom; but heaven spared her this outrage, the only one she was spared.

Every day and at every moment new spies came to trouble her resigned silence and her fervent prayers; architects, brutes in red caps, ferocious and threatening wretches with their caps on their heads, forced their way into her cell, examining the bars, gratings, bolts, doors, the walls, and even the stones of the pavement, to say nothing of the jailers, the turnkeys, and guards. A lion chained in a sheepfold could not have given greater anxiety than this poor queen caused these murderers.

She, however, grew only more and more resigned every day. She knew from these increasing barbarities that her last hour was finally approaching, and she spent all her time in praying to heaven. One day when she was on her knees, she saw in a cell which was opposite to her own, a poor nun who was praying most fervently and she felt that she was praying for her. The two prisoners from the depth of their misery understood one another, for they pointed toward heaven, giving each other a rendezvous there!

These sad and gloomy days in the hot month of August gave place to others as sad and gloomy, only dreadfully cold, as September approached. Suddenly the noisome heat of the cell changed to a damp coldness, the heavy shadow of the

Conciergerie fell dismally over the narrow dungeon, and the captive was exposed to the pestilential moisture which ran from the filthy prison walls. The queen suffered so much from the intense cold that she complained of it at last, but to whom should she have recourse? The little Breton maid alone took pity on her, and would carry her *camisole* to the jailer's fire to warm it, and as in the long, dark nights they permitted the prisoner to have no candle, nor any other light than that of the lamp in the court-yard, which looked like the small funeral lanterns it is the custom to place on newly habited graves, the young peasant, out of sorrow for the queen, would lengthen out her evening work so that she might see her candle burning some five minutes more.

Twelve days passed thus, but on the thirteenth the judges came and began their first examination. They made an officer of the Revolution sleep in the royal cell, but on that night the queen did not retire.

On the 15th of October they came at eight o'clock in the morning to take her to the audience chamber. She was sleeping, and they awoke her by rudely shaking her. She was fasting moreover, and they gave her nothing to eat. When she was questioned, she answered sweetly, speaking like an angel, and gave utterance from her breaking heart to that "*appeal to all mothers*," which made the heroes of September grow pale, and which drew forth applause and even tears from the *tricoteuses* (the name given to the market-women who sat around the guillotine knitting, while they waited for the cart-loads of victims to be brought up for execution) in the galleries. It was only at four o'clock in the afternoon that the examination was terminated, when one of the jailers remembered that the queen had had nothing to eat that day. The poor woman had been battling with the murderers of Louis XVI. for nine long hours. Then they ordered a cup of *bouillon* for her, and the young servant Rosalie was on her way to take it to her, when passing through the large chamber as she was approaching the queen, a Revolutionary policeman snatched the cup from her hands. He was a low, hunchbacked fellow, named Labuziere, who had for his mistress one of the public women of the Palais Royal, whom he had placed on the first row of benches, in order that she might assist, more at her ease, at the torture of the "Widow Capet." Rosalie thought at first that Labuziere was not going to allow the queen to

have the *bouillon*, of which the poor unhappy woman had such need, but he was really meditating a greater crime—to give to an ignoble creature who wished to have a good look at the queen, an opportunity of approaching her still closer; and so he took the broken cup out of Rosalie's hands, who was also in tears at this new insult. The cup was given to Labuziere's mistress, and she, in her impertinent curiosity to see the queen, carried her the *bouillon*, half of which she spilt on the way, every drop of which as it fell on the floor was a drop of blood less in her Majesty's veins. That same day Marie Antoinette, the queen of France, was condemned to death, and Labuziere went off to sup with his mistress.

Before the fatal day arrived the queen asked for a priest; the republic sent her one of its own, whom the queen refused to see, and knelt alone before her God. At last the day of her deliverance came. The day before the royal victim had mended with her own hands the black dress which she wished to wear to the scaffold, but as she had appeared before her judges too handsome and majestic in this poor widow's gown, they would not permit her to wear it on the day of her death, so that it was in the white peignoir which her sister Elizabeth sent her that she went to the guillotine. Of her two widow's caps she had made one, but without strings or any sign of mourning—she no longer needed to wear mourning for any one. She arranged her lovely hair for the last time, and shuddered to find it had grown perfectly white in her last twenty-four hours! She finished her last toilette by putting on her feet the same little shoes she had taken great care to preserve, and which she had not spoiled in the seventy-six days that she had constantly worn them.

Shall I dare to tell you what Rosalie relates? that the queen, half hidden between the wall and her small bed, was endeavoring to change her clothes, when the *gendarme* on guard bent down in order to see her, and when her Majesty turned toward him, her eyes full of tears, and prayed him in the name of honor to desist, he replied that he was acting on his orders; and when she had changed her dress, moved by a feeling of modesty, the poor woman folded it up with care and hid it under the mattress of her bed—and all this time the executioner was waiting for her.

Hardly had the queen left her miserable cell to go to her death, before the officers of the republic, fearing, it would seem,

some miracle might take place to avenge her, sent the jailers to take everything that had been used by the queen; and they wrapped them all up in the sheets of her bed and carried them off, no one knows whither. You know how the executioner tied brutally together the queen's small hands, how he cut her cap which she had taken such pains to mend, and then her beautiful hair, which when cut he put in his pocket — to burn afterward. And you know about the little child who held out its hands to the august victim as she mounted the scaffold, so that for an instant she thought it was her son, the martyred child whom she would only see again in heaven!

You know that she wrote her will secretly, while lying in her bed, and that it was found and given to Fouquier-Tinville. And, finally, you know all about her death, and you do not ask me to tell it you; for, see, I can no more!

From The Spectator.

REALISM IN UNBELIEF.

THERE can be no doubt that it is even more incumbent on people who profess a strong religious conviction to realize what they believe, and not to use vague and unmeaning language, than it is incumbent on those who declare that on all these subjects their judgment is suspended — that they see the weakness of every form of dogmatism, positive and negative — to avoid phrases which imply their concurrence in either the faith or the dogmatic disbelief of other men. To use hollow words concerning subjects on which we profess deep and solemn convictions is clearly less excusable than to use hollow words on subjects on which we profess to be in a state of complete uncertainty, just as it is less excusable to use hollow words with intimate friends, with whom every expression should be trustworthy, than it is with mere acquaintances, with whom phrases are usually interpreted as carrying more superficial and less seriously weighed meaning. It is more excusable to trifle with a suspended judgment, than it is to trifle with religious convictions. Even if one whose judgment is suspended does seem sometimes to assume a belief he has not, or a disbelief he has not, there is less of treason to the truth in it than there is when one whose judgment is deeply convinced on subjects of the highest moment uses, in a thor-

oughly unreal sense, words which ought to mark the focus of his highest feelings, the springs of all his hopes or all his fears. But then this applies rather to the school of true sceptics, than to the school of enthusiasts in positivism or humanism, or any of the new "isms" whose exponents offer us a substitute for Christianity that is to rise above Christianity, to dispel all its narrow and selfish dreams, and to provide in its place the fullest life and the noblest aims possible to men on earth. Bishop Ellicott, in the thoughtful and interesting, if not always very thorough-going addresses on "Modern Unbelief" which he has recently delivered in the diocese of Gloucester and Bristol, has drawn attention to the Christian tone of sentiment so often now adopted by those who repudiate earnestly the Christian and even the theistic faith, and he has rightly classed it as one of the peculiar dangers of the present time — though it is also, we think, quite as much a danger to the rationalists who encourage such a tone of sentiment amongst their followers, as it is to the loose-minded Christians who are attracted by it — that you see such an astonishing affinity for the moods and emotions appropriate to the Christian faith under cover of a creed which rejects and despises that faith. For instance, the bishop quotes from Mr. Fiske's "Outlines of Cosmic Philosophy" the following passage: "Every temptation that is resisted, every sympathetic impulse that is discreetly yielded to, every noble aspiration that is encouraged, every sinful thought that is repressed, every bitter word that is withheld, adds its little item to the impetus of the great movement which is bearing humanity onwards towards a richer life and higher character. Out of individual rectitude come the rectitude and happiness of the community; so that the ultimate salvation of mankind is to be wrought out solely by that obedience to the religious instinct which urges the individual, irrespective of utilitarian considerations, to live in conformity with nature's requirements. 'Nearer, my God, to thee,' is the prayer dictated by the religious faith of past ages, to which the deepest scientific analysis of the future may add new meanings, but of which it can never impair the primary significance." What a writer who, according to Bishop Ellicott, "distinctly opposes and condemns the Christian conception of a personal God," means by "Nearer, my God to thee," unless, perhaps, it be in the sense of one of the *dramatis persona* of

M. Renan's recent dialogues, who says that after organizing society, the next duty of thinking men will be "to organize God," it is not easy to conceive. If the Cause of the universe be not above it, but inferior to it, if, as the modern pantheists teach, it is by evolution only that the unknown and unknowable Cause attains anything like self-consciousness, the prayer "Nearer, my God to thee," in the mouth of such a one, must be either a mere empty aspiration after his own share in a universal development which no one can either advance or retard for a moment, or an ejaculation suited to a cast-off belief, and of which the "primary significance" is not only "impaired," but wholly lost. Surely a writer of this kind is trifling with very serious subjects, when he professes that language whose whole scope implies a divine life of the highest imaginable perfection and love in the Creator of the universe, loses none of its meaning in the mouth of one who regards the Cause of the universe as unknown and unknowable, and therefore, of course, as not a proper object for human love at all. But Mr. Fiske is not alone in this use of the language of faith and feeling towards what is not a proper object for any feeling except mere intellectual wonder, or in speaking with the utmost confidence of what the unknown and unknowable Cause is about to do for the human race. Even Miss Harriet Martineau, who confidently expected, and indeed, if we may judge by her language, positively relished, the thought of personal annihilation,—who, indeed, took credit for that annihilation almost as if she were discounting the value of a contingent remainder of slight probability,—regarded it as one of the great advantages of her new freedom that she could be certain, first, that the Cause of the universe was "wholly out of the sphere of human attributes;" and next, that "the special destination of my race is infinitely nobler than the highest proposed under a scheme of divine government." Yet such benevolent presages for the future of her race were evidently mere leaps in the dark for one who boasted that the ultimate source of being was quite beyond the sphere of human attributes. If the "process of the suns" has ripened men's thoughts, yet it will, to all appearance, rot them too. A Cause which takes no special account of man, except as one phase in the infinite variety of successive change, is just as likely to get rid of the race, as of each individual of the race. You cannot argue from actual historical

progress, unless you also go back to the ages which preceded life, and note that in our own satellite—the moon—for instance, there have apparently already elapsed uncounted ages since the last organization such as we know on the earth was extinct. Once launched into the sphere in which human love and faith and hope have no meaning, to indulge glorious visions for our race, except of the most ephemeral and conditional kind, is a sheer and very cheap bit of sentimentalism, like wishing your friend the good luck to pick up a magnificent diamond in the streets, or bidding your betrothed "become the bride of a ducal coronet, and forget me." Of course, it is quite reasonable, on the ground of pure experience, to hope that as improvement has gone on so long,—for so many thousand years,—the same improvement may continue for, at all events, a few hundred years more, in the absence of any cosmic catastrophe which might prevent it. But that is a very different thing indeed from going into raptures as to the far higher destiny which you have, as an agnostic, a right to anticipate for your race than any theist—who believes the Creator to have a special purpose in making man in his own image—has any right to anticipate. That is using unreal words,—playing fast and loose with the unknown and unknowable, in the very way in which Christians are (too often justly) charged with playing fast and loose with the solemn truths they profess.

But perhaps the most curious instance of this tendency of the enthusiasts of humanism to take credit for religious sentiments and affections better a great deal than Christianity itself could justify, is to be found in Mr. Frederic Harrison's contribution to the new "Symposium" in the *Nineteenth Century*. Mr. Frederic Harrison—one of the most distinguished of the English Comtists,—will hear of nothing supernatural. He rejects all theology, and says religion must be grounded entirely on what is "frankly human." But it must be a great deal more than mere morality:—

Morality will never suffice for life; and every attempt to base our existence on morality alone, or to crown our existence with morality alone, must certainly fail. For this is to fling away the most powerful motives of human nature. To reach these is the privilege of Religion alone. And those who trust that the Future can ever be built on Science and Civilization, without Religion, are attempting to build a pyramid of bricks without straw. The solution, we believe, is a non-

theological religion. There are some who amuse themselves by repeating that this is a contradiction in terms, that religion implies theology. Yet no one refuses the name of religion to the systems of Confucius and Buddha, though neither has a trace of theology. But disputes about a name are idle. If they could debar us from the name of Religion, no one could disinherit us of the thing. We mean by religion a scheme which shall explain to us the relations of the faculties of the human soul within, of man to his fellow-men beside him, to the world and its order around him; next, that which brings him face to face with a Power to which he must bow, with a Providence which he must love and serve, with a Being which he must adore, — that which, in fine, gives man a doctrine to believe, a discipline to live by, and an object to worship. This is the ancient meaning of religion, and the fact of religion all over the world in every age. What is new in our scheme is merely that we avoid such terms as "Infinite," "Absolute," "Immaterial," and vague negatives altogether, resolutely confining ourselves to the sphere of what can be shown by experience, of what is relative and not absolute, and wholly and frankly *human*.

On the contrary, we should have said that what is new in the positivist scheme is that it proposes to foster and cultivate feelings of love and adoration in man towards an object which it does not even pretend to exhibit as possessing any of the characteristics fitted to inspire those feelings. Waive the words infinite, absolute, immaterial, and all other vague negatives as completely as you will, and what is there in the mere procession of events which have made human nature what it is, and us what we are, — if this has been done without purpose, without sympathy, without love for us or for our fellow-creatures here, — to justify even a momentary emotion of love, or a single act of service, towards the chain of natural facts and laws which take the place, we suppose, in positivism of the theist's Providence? We can understand, indeed, the necessity of bowing to the power which unrolls itself in the universe, though not any duty of doing so. It is no one's duty to acquiesce heartily in the succession of day and night, or in the circulation of the blood and the secretions of the body, — any more than in being born. But why am I to "love" the physical providence that adapts me to the world and the world to me? Does any one think of loving the locomotive or the steam that whirls him along the line, or even the sea which bears him on its waves, or the electric current that shoots

along the wire? "Love" and "adoration" must be kept for moral qualities of some sort. No one can adore Mont Blanc, though he can admire it, or Vesuvius in eruption, though he may fear it. If our affections are to be cultivated towards the power which controls our lives, we must know something of that power which will entitle it to our affections. If all we know is that it has produced the universe as we see it, including ourselves, with all the evil and all the good in us; and further, that it furnishes us, — unconsciously, we suppose, according to the positivist religion, — with all we have, both that which we have and love, and that which we have and hate; that it will take us away again before long, and replace us by others; and that as it deals with us, so, in all probability, it will deal with our race, and all the races of living things, — extinguish them, when the time comes, in favor of some other *régime*, — we do not know how any didactic inculcation of love and adoration could induce reasonable men to foster love, and indulge adoration, towards a being so closely veiled from the gaze of men. Mr. Frederic Harrison seems to us to desire to borrow from a system which he rejects that which is peculiar to that system. The agnostic may justly inculcate the study of nature's laws, and enlarge on the marvellous storehouses of nature's forces, but as to training us to love an enigma, to adore those protean forms of natural energy which result now in the conflagration of a world, and now in the plunging of a planet into the frozen sleep of an Arctic winter, — the attempt must be a failure. As there really is a God who loves us behind this mysterious succession of nothingness, life, pleasure, pain, good, evil, death, memory, and resurrection, that God must be the object of the deepest affections and the profoundest adoration. But for one who will hear of no awful will behind the changes of the external world, to ask for love and adoration towards the unknown power which flows through this strange current of phenomena, is to demand what is unreasonable and monstrous. It is simply unreal sentimentalism to require the attitude of mind appropriate towards a God of love and righteousness, from one who believes in no God of love and righteousness, but only in the great procession of natural phenomena, including — though for a span which is hardly worth mentioning in such an eternal procession as that — the phenomena of our human life.